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CRITICAL REVIEW.

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For the Month of November, 1772.

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ARTICLE I.

*Institutes of Botany; containing accurate, compleat and easy Descriptions of all the known Genera of Plants: Translated from the Latin of the celebrated Charles Von Linné, Professor of Medicine and Botany in the University of Upsal, &c. Translated by Colin Milne. Part I. and II. 4to. 12s. boards. Griffin.*

THE science of botany has received so great improvement from the industry of the celebrated Linnæus, that a translation of the Genera Plantarum into the English language, must prove of great utility towards diffusing an acquaintance with the system contained in that admirable work. Dr. Milne has, therefore, undertaken the execution of a design which cannot fail of being highly acceptable to all such lovers of that branch of natural knowledge, as are not competent masters of the Latin tongue, in which the original is written. The version of the Genera Plantarum, however, constitutes but a small part of the volumes at present under examination; for Dr. Milne himself makes a considerable figure as an author, in the view which he has prefixed of the ancient and present state of botany. Previous to that detail, he expatiates on the extent and advantages of the science, and the obstacles that have retarded its progress; among the latter of which, he reckons the similarity of plants, together with the multitude and minuteness of the objects that enter into the study of botany. To these circumstances he adds, the confusion that has ever prevailed in botanical language; and the great uncertainty in fixing the genera, which Linnæus,

deservedly entitled the father of modern botany, to his immortal honour has accomplished. After discussing these points, Dr. Milne considers the natural and artificial methods of arrangement, as they have been distinguished by botanists. Of the former of these methods he observes, that, however its excellence has been celebrated by almost every writer on the subject, the application of it to any useful purpose is almost impracticable; and that the artificial method, as requiring the knowledge of less numerous characters, is infinitely more simple and easy. Having illustrated this subject, the author proceeds to relate the progress of method and systematic arrangement from its simplest rudiments in botanical writings. He distinguishes its progress into two periods, which he names the Historical and Systematic æra. By the former, he understands those early ages in which the writers on botany were chiefly solicitous to collect the names of plants, their virtues, and oeconomic uses; while arrangement lay either totally neglected, or was founded upon principles insufficient for the improvement of the science. The other æra includes the period posterior to the introduction of the systematic method.

The historical æra of botany opens with Theophrastus, the disciple of Aristotle, concerning whose work, entitled, *The History of Plants*, our author observes, that it is executed in a truly philosophical manner. It treats of vegetation, of the origin and propagation of plants, of their anatomy and construction, and of vegetable life. The number of plants which his subjects led him to mention, amounts to about five hundred; and these, Dr. Milne remarks, he has arranged by a method, which, however unsystematical, seems extremely well suited to the rude state of the science, and was, indeed, partly suggested by his main subject. Vegetables are there distributed into seven classes, or primary divisions, which have for their object the generation of plants, their place of growth, their size, as trees, and shrubs; their use, as pot-herbs and esculent grains; and their lactescence, by which is meant every kind of liquor, of whatever colour, that flows in great abundance from plants when cut.

The next botanist of note was Dioscorides, by birth a Grecian, but who flourished under the Roman empire. This writer appears to have been very indefatigable in his researches; but that the science was still in its infancy, may be inferred from a circumstance remarked by Dr. Milne, which is, that though Dioscorides lived near four hundred years posterior to Theophrastus, and was professedly a collector, yet he has not been able to enumerate above six hundred plants; five hundred of which were mentioned by the disciple of Aristotle.

Plants



Plants were arranged by Dioscorides, from their uses in medicine and domestic œconomy, into four classes; namely, aromatics, alimentary vegetables, medicinal, and vinous plants. Concerning the impropriety of this mode of arrangement, Dr. Milne observes, that the qualities and virtues of plants can never afford genuine distinctive marks, because neither fixed and invariable, nor impressed in legible characters upon the bodies themselves. That the different parts of a plant likewise, often possess different and even opposite virtues; so that, supposing such virtues to be known, and to be misapplied to the purpose of vegetable arrangement, the root must frequently fall under one division, the leaf under a second, and the flower and fruit under a third. We shall present our readers with a subsequent part of the author's sensible remarks on this method of arrangement.

—If we reflect that the sole end of such arrangement is to facilitate to others the knowledge of plants, the insufficiency and even absurdity of methods founded upon their virtues will quickly appear. A stalk of vervain is presented to me, which I am to investigate by a method that has the virtues of plants for its principle. How am I to proceed? Before I can settle the class under which it is arranged, I must discover its virtue; and such discovery being the result of repeated experiments on various parts of the human body, may require years for its accomplishment. Thus such methods of distribution are totally useless in investigating plants, and therefore highly improper to be employed. A genuine distinctive character founded on the external parts, which a little instruction soon renders familiar, will cut short this work of years, and determine almost at sight the class, genus, and species of the plant in question. In the first case there is no principle whatever upon which to proceed; in the second the ground is sure, because the external parts are always present, and always obvious to sight. The structure of the root, stem, leaves, flower and fruit, is an object of sight, and can always be recognized: the virtues and medicinal powers of plants afford no distinctive character, and cannot be recognized without a series of experiments made expressly with that view. It deserves likewise to be remarked, that the virtues of plants employed in medicine have been much better ascertained since the introduction of genuine systematic arrangements than at any former period: and it is more than probable that the nearer we approach the order of nature, with greater certainty and facility shall those virtues be detected. The powers and sensible qualities of a single plant of any of the natural families being discovered, those of the rest no lon-

ger remain concealed; as so many circumstances of resemblance in the external structure may well induce something more than conjecture that their qualities and effects upon the human body cannot be very dissimilar. And, indeed, it is its extreme importance to physic, that renders the discovery of a natural method in botany, so desirable an object: considered merely as an arrangement, whose chief object is to facilitate the knowledge of plants, it must yield the preference to many of the artificial methods already known. This is demonstrated at large in the preceding section.

• The same causes which render methods founded on the virtues of plants, unfavourable for the purpose of investigation, must evidently disqualify all their other variable qualities and accidents from holding a place in a genuine distinctive systematic arrangement. The *natale solum* of plants, which is one of Theophrastus's divisions, affords no more a distinctive character than their powers and virtues. Many countries, as well as many soils, produce the same individual plants. The same species which crown the mountains, frequently cover the fens: and plants which have long been reckoned the peculiar inhabitants of some parts of Asia and America, are now found to grow naturally in equal perfection in the very different climates of Lapland and Siberia. In fine, however useful the natural soil and climate of plants may be in gardening, they are circumstances of no utility whatever, when employed as the foundation of a mode of arrangement.

• The size of plants, which suggested the ancient division into trees and shrubs, is no less an equivocal mark of distinction than the circumstances already mentioned. The vine, which modern botanists denominate a shrub, was ranged by Theophrastus in his third class, containing trees. In fact, every thing respecting size is so much affected by differences of soil, climate and culture, that the same plant, in different circumstances, shall differ exceedingly in height, and, in a method founded upon that accident, be arranged sometimes as a tree, sometimes as a shrub, and sometimes even as an under-shrub, according as it exceeds, equals, or falls short of a given standard.

• No less insufficient and despicable are characteristical marks drawn from the sensible qualities of plants; I mean their colour, taste, and smell.

• Of all the attributes of vegetable nature, colour is perhaps the most inconstant. Heat, climate, culture, soil, and a thousand circumstances contribute to produce almost endless diversities in that quality, and render the transition from  
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one colour to another natural and easy. Red and blue pass easily into white; white into purple; yellow into white; red into blue; blue into yellow. In the same leaf or flower are frequently observed several different colours. Variations too in point of colour are often found to take place, not only in different individuals of the same species, but likewise in similar parts of the same individual plant. Marvel of Peru and sweet William produce flowers of different colour upon the same stalk.

Objections equally valid lie against taste and smell. The former varies in different individuals from differences of age; and even in the same individual, at different times, according to the morbid or sound state of the organ. The latter is different in different subjects, and varies in each. The effluvia sent forth from the same body are not always of equal intensity; which is the reason that dogs discover their masters in a crowd with much greater facility at one time than another. In plants, taste is subjected to continual variations from differences of climate, soil, and culture. Garlic, in some climates, particularly in Greece, is said to lose its rankness; apples and pears that grow naturally in the woods are intolerably acid; celery and lettuce, which culture renders sweet and palatable, are, in their wild uncultivated state, bitter, disagreeable, and, in some cases, noxious.

It appears from a faithful detail of botanical history, that no systematic method of arrangement was invented before the middle of the sixteenth century, when Conrad Gesner first suggested the idea of arranging plants by the parts of fructification, which, from their great variety, and superior constancy, deserved the preference above every other classical distinction. Though Gesner, however, suggested the idea, he established no plan upon this principle, but the application was made some years afterwards by Cæsalpinus, a physician of Pisa, who thus introduced the systematic botany, the second grand æra of the history of the sciences.

Our author observes, that each particular organ of the flower and fruit furnishes sufficient variety to serve as foundation of a method of arrangement; but that all are not equally proper for that purpose. That the first systematic writers made choice of the fruit, as being the most essential part of vegetation; not being aware that the figure of the fruit is always more liable to change than that of the flower; nor advertent that this last being prior to the other, and appearing at a time the most proper for botanical researches, it seemed pointed out by nature as peculiarly adapted for furnishing classical distinctions. Dr. Milne places in a very clear

light the defects of the method of arrangement founded upon the fruit, shewing likewise the advantages of classing vegetables by characters taken from the flower. He mentions, however, one striking inconvenience, of which a partiality to this method is productive. This is, that the parts of the flower engross the whole attention of modern botanists, while those of the fruit are almost totally neglected; than which nothing can be more preposterous or absurd. For that the seed-vessel and seeds are confessedly organs of, at least, equal importance, and therefore entitled to an equal share of attention, Dr. Milne observes, that the first systematic writers attached themselves to the fruit, in preference to the flower; and that it was not till upwards of a century after Cæsalpinus, the father of system, that Rivinus, professor at Leipsic, produced another revolution in the science, by proposing a method founded on the regularity and number of the petals. We shall lay before our readers the author's judicious estimate of the merits and defects of Cæsalpinus's method of arrangement, as it is productive either of facility or difficulty in leading to the knowledge of plants.

A carnation is presented to me, which I am to refer to its proper class in Cæsalpinus's arrangement. Is the plant in flower? I am immediately at a stand: it can never be reduced to its class in that stage of vegetation. It must have ceased to flower; it must have ripened, or, at least, have begun to form, its seed-vessel or seeds. This preliminary adjusted, my first enquiry is, to which of the two grand divisions does the plant in question belong? In other words, is it a tree, or an herb? To solve this query, I may frequently be obliged to wait for several months; because the answer to it is principally regulated by the duration of the stem. Behold me then at a stand a second time. I know it will be said that this is an exaggerated representation; that I paint imaginary difficulties; and that he must be a novice indeed, who, in such circumstances, cannot distinguish at sight a tree from an herb. I grant it; he would be a novice; but let it be remembered that the sole intention of arrangement is to facilitate the knowledge of plants: the learned need no such auxiliary; it is the novice only that requires it; and that system is undoubtedly the most excellent, which best accommodates itself to the wants of the merest novice—an axiom which, although self-evident, has been so little regarded, that the distinction into herbs and trees was successively adopted by every succeeding writer to the time of Rivinus, by whom it was very properly rejected as uncertain, and unconnected with fructification. To return to my plant. Having no certain



criterion of the justness of my determination, I must have recourse to conjecture, a dangerous interloper in science, which much oftener conducts to error than truth. Supposing, however, that I am fortunate enough to guess right, and refer the plant in question to that division of the method which contains herbaceous vegetables: how am I next to proceed? By the determination just given, two classes are entirely cut off; those, to wit, containing trees and shrubs: and I have to seek for my plant among the thirteen classes which remain. The presence of the fruit implying the previous existence of the flower, serves effectually to exclude it from the fifteenth class, which consists of plants that have neither flower nor fruit. I now examine the fruit particularly, and discover it to be a single undivided capsule containing numerous seeds. My plant then cannot belong to the third class, the character of which is a single seed; nor to the fourteenth, because although the plants pertaining to it bear numerous seeds, they are contained either in more capsules than one, or in a single capsule with several cells. Its pretensions to a place in the eleventh, twelfth and thirteenth classes are equally ill-founded, because in these, the seeds, though numerous, are naked, that is, have no capsule or case. In the tenth class, the number four; in the eighth and ninth, the number three; and in the sixth and seventh, the number two, predominates; but neither two, three, nor four, predominates in the fruit in question: and therefore the plant cannot be referred to any of these classes. There remain only the fourth and fifth classes, to one or other of which the plant in question must belong. These two classes differ only in the nature of the seed vessel, which, in the former, is pulpy, in the latter, dry. But the plant to be explored has a seed-vessel that is dry, not pulpy; and is therefore to be referred to the fifth class, the plants of which have numerous seeds contained in a single undivided capsule.'

Our author, continuing his detail, relates the modes of distribution proposed respectively by Morison, Ray, Tournefort, Knaut, Herman Boerhaave, and others; and illustrates with great precision the different methods recommended by these writers; discovering their several improprieties and defects, and pointing out the necessity of more certain and invariable characteristics than had hitherto been adopted in botany. This minute account he concludes with a view of the method proposed by Magnol, a celebrated professor of botany at Montpellier, in the beginning of the present century; the very foundation of whose mode of arrangement, he justly pronounces to be fallacious, and that facility is not its characteristic.

teristic. After an accurate investigation of all preceding methods, Dr. Milne comes at length to delineate the celebrated system of Linnæus, which is founded upon the number, proportion, situation, and union of the stamina, chives, or slender threads of the flower. This method proceeding upon a fancied analogy between the several parts of plants, and those of animals, leads our author into an analysis of the sexual system; a doctrine that has equally excited the scepticism and admiration of enquirers, and which Dr. Milne examines with his usual accuracy. He observes of this hypothesis of the existence of the sexes in plants, and of their concurrence for the purpose of impregnating the seeds, that it seems strictly conformable to the general laws of nature, and is supported by a variety of proofs. As the doctrine of the sexes is the most curious subject in botany, we shall submit to the consideration of our readers some of the facts which are produced to support it.

‘ Palms are of the number of those trees which bear male and female flowers upon different individuals. Herodotus relates that in the eastern countries, where they make great use of the fruit of the palm-tree, the peasants fasten branches of the male palms upon the branches of those which bear the fruit: and even in the time of Alexander, the inhabitants of the country, who cultivated palm-trees, had perceived that it was of importance to the fructification that the male and female palms were found in the neighbourhood of each other. The fact related by Herodotus is confirmed by the more recent observations of Tournefort, Hasselquist, and other botanists; yet did not appear sufficiently conclusive to produce any alteration in the opinion of the first mentioned naturalist, who uniformly denied the existence of the two sexes in vegetables.

‘ Prosper Alpinus affirms, that the large crops of dates which the Deserts of Arabia produce, depend not upon any particular mode of culture, but are occasioned by the powder or downy dust of the stamina which the wind transports from the male flowers of the date-tree upon the female.

‘ In short, Theophrastus, Pliny, Prosper Alpinus, Tournefort, Hasselquist, and Kempfer, unanimously think, that, without the assistance of the male flowers, not only the dates would be greatly inferior in point of richness and taste, but the stones, like eggs which wanting the germ, cannot be hatched, would be found absolutely incapable of vegetation.

‘ Father Labat relates, in his Voyage to America, that he saw near a convent of his order at Martinico a female palm-tree



tree which produced fruit though planted at the distance of some leagues from all those of its species. This fact, however, contains nothing contrary to the opinion of the authors already quoted, because the reverend father immediately subjoins that the stones of the date-tree in question did not rise, and that its fruits were not so luscious and well-tasted as those of Barbary and the Levant.

‘ J. Bauhin asserts that a very old palm-tree which he saw at Montpelier had not begun to produce fruit till the age of fifty or sixty years ; but he does not mention whether the fruits were well-conditioned, or if the stones were found capable of vegetation.

‘ Geoffroy, in his *Materia Medica*, relates, that, in Sicily, the flowers of the male pistachio-tree are suspended over the branches of the female, with a view of impregnating the fruit.

‘ M. Peyssonnel, French consul at Smyrna, and M. Cousinieri, chancellor at Chio, affirm, that in the Levant, turpentine and mastich-trees are distinguished into male and female, from the absence or presence of the fruit, and supposed fertilizing quality of the dust of the stamina. Cousinieri adds, however, that he has found a kind of mastich tree, which carried both male and female flowers upon the same individual.

‘ M. Duhamel du Monceau, of whose very ingenious observations upon this subject, I have frequently availed myself in the course of this section, relates an experiment performed by himself and M. Bernard de Jussieu, a celebrated French academician, which bids fair to be decisive upon the question of the sexes. In the garden of M. de la Serre of the Rue S. Jacques at Paris, was a female turpentine-tree, which flowered every year, without furnishing any fruit capable of vegetation. This was a sensible mortification to the owner, who greatly desired to have the tree increased. Messieurs Duhamel and Jussieu very properly judged that they might procure him that pleasure by the assistance of a male pistachio-tree. They sent him one very much loaded with flowers. It was planted in the garden of M. de la Serre very near the female turpentine-tree, which the same year produced a great quantity of fruits, that were well-conditioned, and rose with facility. The male plant was then removed ; the consequence of which was, that the turpentine-tree of M. de la Serre in none of the succeeding years bore any fruit, that, upon examination, was found to germinate.

‘ The author just-mentioned relates that he has in possession a vine-branch which flowers every year, but produces no fruit,

fruit, owing, as he supposes, to the deficiency of pistils. A quantity of strawberries, in the garden of the same ingenious botanist, prove annually barren, because the flowers are totally devoid of stamina.

‘ By the report of several naturalists, a solitary plant of female hemp, spinnage or mercury produces very few seeds that are capable of vegetation. Those who admit not the distinction we would establish, affirm, that even this small quantity of well-conditioned seeds is sufficient to prove that the concourse of the two sexes is not absolutely necessary; but if a single plant of female hemp that is surrounded by male plants, affords numerous perfect seeds; and if a similar female plant, which is deprived of that assistance, produces only a few, ought we not to conclude, that the emanations of the male plants have an influence in impregnating the female? And may we not be justified in asserting, that the female flowers of the solitary plant just mentioned were fecundated either by a male plant of the same species, whose fertilizing dust had been transported by the winds from a distance, or by some plant analogous to it in nature, which grew in the neighbourhood? Add to this, that it is not uncommon to find some male flowers upon female plants, and some female flowers upon male plants. The mastich-tree of M. Coufineri furnishes us with one example. The *gleditsia* of M. Duhamel with a second.’

The part of the *Genera Plantarum* which is here translated, is what contains a description of the following classes; namely, Monandria, Diandria, Triandria, and Tetrandria. The version is both perspicuous and concise, and delineates the characteristic descriptions of the original with fidelity and precision. Independently of the translation of Linnæus, Dr. Milne’s historical account of botany highly merits approbation; as it not only presents us with a view of the various progressive attempts which have been made for the improvement of the science, but also fully exhibits the several imperfections peculiar to the different modes of arrangement. In a work of this sort our ideas are carried beyond the limits of a particular branch of natural knowledge, and we contemplate in the efforts of various authors, the weakness, the ingenuity, and gradual improvement of the human mind.



II. *The Principles, Elements, or primary Particles of Bodies, inquired into; and found to be, neither those of the Chymists or of the natural Philosophers; but Earth, Water, Air, Fire, and Frost. Taken from the Observance of Nature, and numerous Experiments. By John Gibson, M. D. 8vo. 2s. 6d. Nourse.*

Natural philosophers have generally divided the material universe into four component principles or elements, of which different combinations were supposed to form the immense variety of bodies that exist in the creation.

These elements are earth, water, air, and fire. In some authors mention is made of *frigorific particles*, which they appear to have considered as an element directly opposite in its nature to that of fire. But having treated of the subject only transiently, and produced no arguments for ascertaining the positive existence of such particles, it has been uniformly admitted by the most eminent physical inquirers, that cold was merely the consequence of a privation of heat, and not the effect of an element actually existing in nature. This doctrine, however, which has so currently prevailed in philosophy, the author under our consideration attempts to refute, and endeavours to establish the idea of the element of frost existing in bodies as essentially as any of the other principles of matter.

From what is expressed in the title-page of this treatise, it might be imagined, that the author maintained the primary particles of bodies to be entirely different from those which entered into the conception of all preceding inquirers. The fact, however, is, that he only introduces the element of frost among the constituent principles of matter. We shall pass over Dr. Gibson's account of the elements of earth, water, air, and fire, and proceed to that part of the enquiry where he treats of the element of frost; the existence of which he endeavours to prove by the reports of our senses, and confirm by reason and experience.

Dr. Gibson sets forth with observing, that we are sensible of cold as well as of heat, and are warranted to reason from our feelings in the former, in like manner as in the latter; for we know that both these sensations are raised in us by certain particles which act on the nervous papillæ on the surfaces of our bodies, but affect us in a different and opposite manner. That besides the judgment we form from the senses, the degrees of motion and action in the particles of both elements are ascertained by the thermometer. These observations the author thinks, evinces the positive action of the element of frost; but he proceeds to prove the existence of that principle in a quiescent and active state, in other instances. We shall lay be-

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fore our readers the arguments by which the doctor endeavours to establish his opinion on this subject.

‘ Could they unite and cement the fluid parts of water into a solid body, without being material? Could they increase its specific levity, and render it elastic when formed into ice, in any other way than by the interposition of material particles? It is obvious to every observer, that the particles of frost banish the particles of fire, or destroy their action, both in water and air; for the degree of heat gradually decreases in water, and in the atmosphere, till freezing ensues, and afterwards for many degrees, as the frost becomes more intense: this is visible in the thermometer, and sensibly felt.

‘ It is clearly demonstrated from the above, that the action of the elementary particles of frost on those of fire do not render water specifically lighter; for this is only observed of ice. We are certain that the particles of frost increase the density of air, and disjoin the particles of air from water in freezing; which makes it evident, that the diminution of the specific gravity of water, when converted to ice, cannot result from the influences of the frost on air.

‘ In confirmation of the above doctrine, I shall add, that freezing is as certainly and sensibly perceived, nay happens sooner, when water, that has had its air exhausted in the air-pump, is exposed to the action of the elementary particles of frost, at any time, whether they naturally abound in the atmosphere, or are artificially produced from substances in which they are naturally placed.

‘ We find the existence of the particles of frost confirmed by the expansive force which water acquires, merely by the intrusion of the elementary particles of frost into water, that has been deprived of its air; for by observing the effect of the frost, as it becomes more and more intense, we may establish it as a certain rule, that the expansion and levity of water united to frost is increased, in the direct ratio of the quantity of the particles of frost that are intruded and fixed.

‘ Elementary particles of frost are strongly attracted by water; and while the union happens between them, all heterogeneous substances are disjoined, and are either precipitated through the water, or are elevated into the atmosphere; from hence it is with justice said that freezing purifies water.

‘ When the elementary particles of frost are combined with water in ice, they persist in the state of union till they are dispelled by the action of the elementary particles of fire: I need adduce no other proofs of the above, than the keeping of ice in cold cellars through summer and autumn; and snow



continuing undissolved on the northern aspects of mountains, near the summits, in every northern region, for many of the summer months, even in hot seasons, and through the whole of summer in cold seasons.

‘ A common experiment, which may be repeated with ease, shows how the particles of frost may be disjoined from water and other substances, driven through dense metal, and made to form ice. Take snow, and any new neutral or sea salt, mix them together in an earthen or metal pot, place a metal vessel over them with water in it, put the whole over a fire, which will disjoin the particles of frost from the snow and salt below, and impelling them through the vessel above, they will form ice with the included water, sooner or later as the fire is more or less intense.

‘ The elementary particles of frost unite readily even with the earth of soils, when it is nearly dry, though their union with most kind of substances in nature is in general evidently brought about by means of water, as a medium: they also readily enter and unite to wood, to metals, and many other substances.

‘ The elementary particles of frost do not appear to be capable of uniting with the elementary particles of fire, even when they are mixed with water, though they readily join with the water, through which they are diffused: as witness the freezing of fermented liquors, spirits, oils, and many other substances, in which many particles of fire are found.

‘ It is not improbable that elementary particles of frost exert their effects by entering into the composition of substances, uniting intimately with their parts, and so coalescing: it seems to be by a repelling force that they banish the particles of fire from bodies, impede their action, and take possession themselves: thus in fermented and spirituous liquors, they convert into ice the particles of the water all round the circumference in bottles and other vessels, and drive the particles of fire to the centre, where we find them lodged, on breaking or boring through the surrounding ice.

‘ We find, by numerous observations and experiments, that the elementary particles of frost readily penetrate through the substances of the most solid metals, as of gold, of silver, and of iron, and freeze water, purposely shut up in their cavities: glass, timber, earth, stone, and almost every other substance, are pervious to frost, as we too often find to our loss by the bursting of such vessels in hard winters, when intense frost prevails for any considerable time.

‘ In many chymical processes we discover the power and influence of the elementary particles of frost; in the chrysalization

zation of salts, which only form into their proper figures when they are placed in the cold, that is, where the element of frost abounds: nor is their existence and activity less observable in the solution of salts, all of which raise a sensible degree of cold; a certain proof of the presence of the element of frost.

Elementary particles of frost are found united to the acid spirits which abound in several kinds of salts; they are at all times diffused through every part of the atmosphere, even in the hottest climates, though they are more copious at some times than at others: they generally more abound in the higher places of the earth than in the lower; and in sultry weather we often discover, by the falling of hail, that they prevail over the element of fire aloft in the atmosphere, when our senses discover little of their effects below on the surface of the globe.

Happily for mankind, who live on the face of the earth, they are never entirely deprived of the elemental particles of frost: this the ladies know, and by the use of their fans in the hottest weather, and in the warmest rooms, while they wave them, they bring the frost into quicker motion, which raises on their faces and necks an agreeable sensation of cold.

I may draw as a conclusion from the above, that the greater effect of the particles of frost on our senses, by motion raised in the atmosphere, is a proof of the elementary particles of frost being different in their nature from those of fire; for no acceleration of the motion of the atmosphere by winds, raises any sensible degree of heat, though the blowing of winds sensibly renders cold more intense.

The elementary particles of frost are found lodged in the substance of many fossils, and some minerals and metals perhaps owe their celebrated virtues, as medicines, to the power of the particles of frost which are united in their substance; let my reader consider with attention the effects of sal ammoniac, nitre, and other salts, and of lead, and several of its preparations, and he will easily understand that my assertion is well founded.

The greatest natural repository of the element of frost is in the northern climes; there the particles domineer undisturbed by the sun for a considerable part of the year; but unable to bear the active power of elemental fire emitted from the sun, in the lengthened days, they fly his approach, but follow him in his diurnal course: hence the element of frost refreshes and invigorates the inhabitants of the torrid zone, in the cooling breezes of the mornings and evenings, and thro' the



the night, which preserves the vegetable world from falling victims to intense heat through the day.'

Dr. Gibson taxes the philosophers who maintain, that the sensation of cold in us is merely a privation of heat, with the reproach of talking like the vulgar; and to convince any of these gentlemen, that the elementary particles of frost are really existing, place him, says he, before a confined current of north or east wind, which will, in a very short time, carry conviction through every part of his body. The experiment which the doctor proposes would, undoubtedly, operate very strongly upon our sensation, though there may still be room to question, whether the effect thus produced is the consequences of a positive or negative quality. It must be acknowledged, however, that some of the arguments urged by Dr. Gibson for establishing his opinion, are not destitute of plausibility.

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III. *Sermons on different Subjects. By the late rev. John Jortin, D. D. Vol. V. VI. VII. 8vo. 15s. White. [Continued.]*

THIS excellent writer is a professed enemy to fanaticism and superstition; and, in several of his discourses, very freely and properly exposes the errors and absurdities, which weak, visionary, or designing men have introduced into the church of Christ, under the pretence and appearance of religion.

The first sermon in the sixth volume treats of the qualifications requisite in those, who read and hear the word of God. The qualifications which the author particularly mentions, are, attention, discernment, or the exercise of private judgment, impartiality, meekness, docility, candour, and a resolution to practise the duties which the scriptures enjoin. In warning the Christian auditor never to give up his natural, indefeasible right of judging for himself, never to surrender his reason and his conscience to knaves, hypocrites, or enthusiasts, he says:

'If any teacher would persuade you that it is not necessary to keep Christ's commandments, and that it sufficeth to lay hold upon him, to hope and trust in him, believe him not; for Christ says, If ye love me, keep my commandments; and, Why call ye me Lord, Lord, and do not the things which I say? If any teacher should tell you that God dooms the greater part of men to eternal misery, for not doing those things which it was impossible for them to do, or for doing those things which it was impossible for them to avoid, believe him not; for God declares of himself that he is just and righteous, merciful and good, and that he willeth not the death of a sinner. If any teacher should tell you that departed saints and angels are to be prayed to, to intercede for us with God,

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believe him not; for there is one Mediator between God and men, even Christ Jesus. If he should tell you that you ought to worship images and pictures, believe him not; for the second commandment positively forbids it. If he should tell you that it is unlawful for you to partake of the Cup at the holy Communion, believe him not; for from St. Paul's account it appears plainly that all Christians used to partake of it in his time; and the same practice continued in the whole church for more than a thousand years. If he should tell you that there is one bishop appointed in the Christian world to be the infallible head of the church, to whose dictates all obedience is due, believe him not; for in the New Testament there is no such person to be found. Such a Lord and Master is not a creature of God's making. Lastly, if any teacher should tell you that he himself is inspired of the Holy Ghost in an extraordinary manner, believe him not. Let him work miracles, first, and then it will be time enough to take his doctrine into consideration, and to enquire whether it corresponds with the gospel.

The subjects, of which the author discourses in five subsequent sermons, are, The proper Sacrifice of a Christian; the Danger of conforming to the Customs, Fashions, and Examples of the World; the pernicious Effects of Presumption and Ambition; the Nature of Christian Unity; and the Meanness and Malignity of Indolence in our civil and religious concerns. In this age of pleasure and dissipation, the following observations are highly worthy of attention.

\* A person of quality, when he enters into this world, enters not into possession of the virtues of his ancestors, if they had any; nor will they descend to him by right of inheritance. They must be his own goods, and he must acquire and preserve them by his own industry. A father, it may be, can make his child's fortune; perhaps he can do more, he can instruct him how to deserve it, and to make an honest use of it: but the rest depends upon the child's future temper and conduct. The offspring of the great are born noble or rich; but neither wise nor learned; and if they do not become such, they are the more guilty, as they have only that employment, and nothing to draw them from it, but rather every inducement to assist, invite, and encourage them to it.

\* The mind of man is naturally a fertile soil: it will bring forth something, either good or bad. When reason is stupified, and the passions are unruly, evil thoughts and evil deeds will be the scandalous product. Indolence and laziness is ever pernicious to human creatures; for there is in all of us an active principle, and even the lazy must have their occupations; and these will be frivolous pleasures and unprofitable diversions, to make the most favourable supposition; for seldom do the lazy stop there, but often proceed to worse things, to dishonesty, immorality, and debauchery.

\* But for all these things God will bring them into judgment, and say to such unprofitable servants, What have you done with my talents? I gave you a mind capable of improvement, and a body formed for action; I gave you all the conveniences of life, and I excused you from the toil and drudgery to which so many of your fellow creatures were doomed. What use have you made  
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of all these advantages? The best answer that they can give is, We have been eating and drinking and sleeping, and spending our time in public diversions, in mixed assemblies, and in fashionable amusements. And is this then the life of a man? Good had it been for such a man that he had been born a beast of the field, or an insect.

But besides these polite and honourable sluggards, there is another set of lazy animals, who in some respects are still more blameable. I mean those, who by their station are obliged to work for their bread, and whose condition, all things considered, is by no means to be accounted miserable. This we know, that the Scriptures have pronounced that man happy, who labours, and who eats the labours of his hands. When such people have their lot in a Christian nation, and in a land of liberty, and live under the protection of mild and charitable laws, they have no just reason to repine at their situation, and to envy their superiors. Idleness, which is blameable in all persons, is insupportable in such as these; nor have they any claim to a maintenance from the public. The Scriptures have declared that he who will not work, should not eat; and it cannot be called an unmerciful severity to bestow nothing upon those who are able but not disposed to do any thing for themselves, who by obstinate laziness and perpetual sottishness become public nuisances, who prefer beggarly indolence to honest industry, who, having two hands and two feet, expect to be fed like the fowls of the air, and to be clothed like the flowers of the field, though they resemble not the one or the other, being neither useful nor ornamental in the creation. The only favour which suits such persons is compulsion; as amongst their relations, the brutes, those which will not be led, must be driven.

In the seven following sermons, the author treats of Prayer; the Parable of the Prodigal; Christ *the Resurrection and the Life*, [which expression, he observes, more emphatically sets forth the sublime dignity of our Saviour's person, than any other, perhaps, in the gospel]; the Emotions of Christ at the Tomb of Lazarus; the Characters, Opinions, and Prejudices of the Jewish Doctors, who conspired against our Saviour; and this Observation of St. Paul, *If in this life only we have hope in Christ, we are of all men most miserable*.

In explaining this text, the author very rightly observes, that St. Paul had a view to the persecutions to which Christians were exposed, in his days, purely on account of their religion. Banishment, as he says, poverty, hunger, nakedness, stripes, prisons, torments, cruel and ignominious death, were the sad portion of those who believed in Christ. It is therefore evident, that if they had nothing to receive beyond this life, instead of finding comfort and satisfaction to compensate these evils, their religion would only have made them completely wretched.

He then proceeds to consider the force and the scope of this reasoning of St. Paul, to prove the doctrine of the resurrection.—Among other reflections he suggests the following, which

place the argument in a stronger light, than that in which it is generally represented.

‘Examine the nature of man closely and accurately, and you shall find in him a desire of life, and a desire of happiness. Nature inspires us all with this double desire. But this desire, so universal, so strong, so lively, so permanent, is the vainest of all sentiments and wishes, if it be a natural impossibility to obtain happiness and immortality. This desire can only haunt us, and make us wretched, if we know that it is unattainable, if we consider death as a dark and dismal night, as a bottomless gulph gaping to swallow us up in silence and oblivion, and to put an eternal end to our being. Who can conceive thus of God and of man? Who can think that our Creator, who is supreme goodness and wisdom, who doth nothing in vain, who gives to every creature such qualities and such dispositions as make them all complete in their several kinds, should have formed man more imperfect than any other creature; that he should impress in our minds a love of life, and yet doom us to annihilation; that he should force upon us a longing for happiness and immortality, and yet make us incapable of possessing the one or the other? He did not form the heavens and the earth to perish immediately after their creation; he did not make the sun to shine for a day, and then to set and rise no more; nor could he call the human soul into being, with all its excellent powers and qualities and dispositions for the short and insignificant duration of this human life.

‘Consider once again the desires of man; you shall find that some of those desires are reasonable, and some unreasonable, but not usually extended to natural impossibilities. For example; all men desire the necessities of life, a capacity to enjoy them, and the love and esteem of those with whom they are connected. These desires are natural, necessary, reasonable, innocent. Others wish for the superfluities of life, and such wealth, honour and power as fall not to the share of one in ten thousand. These desires are unreasonable, but yet they are not the desire of things utterly impossible. Such things are not the wishes of a man who is in his right senses. Thus: we came into the world, and began to be a certain number of years ago: we are contented in that respect; we do not desire that we had been from all eternity. No one ever afflicted himself on that account. It would answer his largest wishes, if he might always be, and always be happy. As to a past eternity, it is no concern to us not to have had it. Again: man is endued with five senses: perhaps amongst God’s creatures there may be some which have as many more; but we do not wish to have more; we are contented with our own. Apply this to the case before us, and observe that if a future state were a natural impossibility, our desire of it must be as absurd as those before mentioned, and God would not have formed us with such inclinations. Upon the supposition that the present life is all, the scheme of things and the plan of Providence, as it relates to man, appears altogether unaccountable and absurd; and this forceth us to have recourse to the doctrine of a future state.’

The remaining sermons in this volume are upon the following subjects, viz. The fatal Effects of despising Religion, exemplified by the Story of Lot, who was derided by his Sons-in-Law,



Law, when he warned them of the approaching Destruction of Sodom †; the Observation of great and solemn Festivals under the Law; the Folly of losing the Soul on any worldly Consideration; Joshua's Engagement for himself and his House to serve the Lord; the Advancement of moral Righteousness, the great Design of our Saviour's coming; and the Importance of the Question, *What shall I do to be saved?*

‘ If this question, says the author, were put to various sorts of people, various would be the answers.

‘ If it had been put to the Pagans of old, their priests would have recommended sacrifices, initiations, purifications, and a multitude of rites and ceremonies, all of them childish and superstitious; some of them profane and abominable. Their philosophers, more reasonable men than the former, but very doubtful about a providence and a future state, would have recommended the moral duties of men to themselves and to other men, but very little of piety or of the duty towards the Deity.

‘ The Mahometans, whose religion hath in it a mixture of Judaism and of Christianity, would advise the practice of the moral and social virtues, faith in God, confession and prayers to him, with a belief in their false prophet, and some superstitious practices recommended by him.

‘ This system, besides that it exalts an enthusiastic imposter into a prophet and a lawgiver, hath this grand defect, that it admits of no Redeemer, no Mediator between God and man.

‘ In the Christian world, the Church of Rome, though the most corrupted of any, yet retains so much of Christianity, that it prescribes, as the way to salvation, several things which are really good and commendable, mixed and debased with the rubbish of human inventions, with things unprofitable and absurd both as to faith and as to practice.

‘ Again; some persons there are to whom if we put the question, What shall we do to be saved? would reply; Why do you talk of doing? You can do nothing: it must all be done in you and for you by the irresistible grace of God. When that grace comes, you are sure of salvation: whilst you feel it not, you are in a reprobate condition.

‘ Whoso looks into the New Testament with unprejudiced eyes, will see that Christ and his apostles give no such answers to such inquiries, but always insist upon something to be done by men, to qualify themselves for the divine mercy, treating them as rational creatures, and free agents.

‘ Lastly; some there are who answer to the question; Believe; or have faith, and thou shalt be saved. These men come upon us with chapter and verse, and produce the words of the text, and other passages of the same kind.

To obviate this last mistake, our author observes, that the belief, which is made the condition and the means of salvation, must include all that is consequent to such a belief; that faith

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\* This discourse very much resembles one of Ostervald's: but as we have not the latter at hand, we cannot say how far the resemblance extends.

in Scripture is not to be taken merely for a firm assent to another person's words, and a trust in them, but denotes a principle which worketh by love, and is manifested by good works; secondly, that when faith or believing is named, as the only condition of being saved, this is spoken to persons who, at that time were not Christians or believers; that when St. Paul required the jailor to believe, he had not yet received the gospel, and faith was the only method to bring him to that state of salvation; that when Christ speaks to his disciples, and when they address themselves to their converts, they not only remind them that faith is the first Christian accomplishment, on which the rest are founded; but they exhort them to obedience, to good works, to live as it becomes the gospel, and to adorn their holy profession by their virtues.

We shall conclude this article with two observations: first, that *σωτηρια* and *σωζω*, in the New Testament, are words which generally signify temporal safety, deliverance from heathen darkness and depravity, &c. without any reference to a future state; and that an inattention to this idea has led commentators and theological writers into several mistakes. Secondly, we may observe, that while every system of religion, except that of the gospel, places the terms of acceptance in some superstitious rites and ceremonies, Jesus Christ and his apostles, place them on more sublime principles, in purity of heart and sanctity of life; and that this therefore is a comfortable, a glorious proof of the divine origin of Christianity.

[ *To be concluded in our next.* ]

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IV. *A Treatise on the Management of Pregnant and Lying-in Women, and the Means of curing, but more especially of preventing the principal Disorders to which they are liable. Together with some new Directions concerning the Delivery of the Child and Placenta in natural Births. Illustrated with Cases.* By Charles White, F.R.S. 8vo. 5s. Dilly.

IN consequence of the improvements introduced into practice by several modern physicians, the improper use of the hot regimen, which was so generally adopted for many years, is at length almost totally abolished in febrile disorders; or, if it still retains its former authority, it is only within the verge of domestic empiricism and prejudice. Unfortunately, however, puerperal women are more exposed to the effects of that pernicious practice than other persons; as in such a situation the treatment of them is usually directed by those of their own sex, who are not only unacquainted with the principles of

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of rational prescription, but are likewise unalterably confirmed in their attachment to such medical rules, as from their youth they have been accustomed to regard with superstitious veneration. The author of the treatise before us proposes regulating the management of lying-in women, respecting both the prevention and cure of febrile complaints, by the same principles which are found by approved experience, to determine the most salutary practice in other disorders of the like kind; and warmly recommends the propriety of the temperate regimen in those cases. Mr. White undoubtedly deserves commendation for endeavouring to apply the general modern improvements in febrile disorders to the particular circumstances of pregnant women; a department in practice highly worthy the attention of physicians, and where prejudice and arbitrary custom have fixed their most inaccessible retreat.

The first chapter of this treatise is employed on the causes and symptoms of the puerperal, or child-bed fever. To account for the origin of this disease, Mr. White looks so far back as the early months of pregnancy; at which period he observes, that the tightness of the stays, and petticoat bindings, the weight of the pockets, and of the petticoats, press the womb already enlarged by the fœtus and its membranes, so strongly against the lower intestines, as to prevent the descent and exclusion of the excrements. Those being retained, the thinner parts are absorbed by the lacteals, which cause, or at least greatly encrease, that obstinate costiveness of which most women complain during the time of pregnancy, and which is also farther encreased by a sedentary, inactive life, and improper diet. This excrementitious matter, continues he, being absorbed into the circulation, undoubtedly occasions a great disposition to putridity. Loss of appetite soon follows, and the stomach and duodenum being no longer distended with aliments, large quantities of bile are collected in the gall-bladder, the cystic and hepatic ducts, and by lodging there soon acquire a putrid or putrescent acrimony.

Besides these circumstances drawn from the general laws of the animal œconomy, Mr. White derives an additional cause of putridity from the management of lying-in women. When the woman is in labour, says he, she is often attended by a number of her friends in a small room, with a large fire, which, together with her own pains, throw her into profuse sweats; by the heat of the chamber, and the breath of so many people, the whole air is rendered foul and unfit for respiration. If the woman's pains are not strong enough, her friends, he remarks, are generally pouring into her large quantities of strong liquors, mixed with warm water, and if

her pains are very strong, the same kind of remedy is made use of to support her.

As soon as she is delivered, proceeds our author, if she is a person in affluent circumstances, she is covered up close in bed with additional cloaths, the curtains are drawn round the bed, and pinned together, every crevice in the windows and door is stopped close, not excepting even the key-hole, the windows are guarded not only with shutters and curtains, but even with blankets, the more effectually to exclude the fresh air, and the good woman is not suffered to put her arm, or even her nose out of bed, for fear of catching cold. She is constantly supplied out of the spout of a tea-pot with large quantities of warm liquors, to keep up perspiration and sweat, and her whole diet consists of them. She is confined to a horizontal posture for many days together, whereby both the stools and the lochia are prevented from having a free exit. This happens not only from the posture of the patient, but also from the great relaxation brought on by warm liquors and the heat of the bed and room, which prevent the over distended abdominal muscles from speedily recovering their tone, whereby they are rendered unable to expel the contents of the abdomen, which lodging in the intestines many days become quite putrid.

The lochia stagnating in the womb, and in the folds of the vagina, soon grow putrid, for it is well known that the mildest humours in the human body, if suffered to stagnate, become so, as soon as the air has access to them. These are in part absorbed by the lymphatics in the womb and vagina, and the effluvia from them help to make the air in the bed, and in the room, more putrid; this air in every act of inspiration is taken into the lungs, and is there again received into the circulation: add to this that women are generally of a lax, seldom of a rigid fibre, owing in some measure to their periodical evacuations, to their sedentary, inactive, and domestic way of life, and likewise to their muscles being surrounded with a much larger quantity of cellular membrane, than those of men; hence also they arrive at their acme sooner than men.

Amongst the poor people who live in cellars, and upon clay ground floors, the air is still made worse by the dampness, and closeness of their houses, and the want of clean linen, and cleanliness in general. Those who live in garrets are also in no better a situation, for the putrid miasmata of several families inhabiting the lower part of the house, ascend to them, already suffering perhaps from the effluvia of a whole family in every single room, the putridity of which is farther in-



increased, by the heat of the sun piercing through the covering of the house; nor is it to be wondered at that they are still in a worse situation in hospitals, where a number are crowded, not only in one house, but in one ward, where the disease is conveyed from one to another by the putrid miasmata lodging in the curtains, bed cloaths, and furniture, and by the necessary houses, which are either contiguous to, or so near the hospital as to occasion a most disagreeable smell, and must of course convey that infection which cannot be more effectually communicated, than by the excrements.

\* The breasts, if drawn at all, are not drawn till several days after delivery, when they are so full as to be perfectly gorged, and as hard as stones. By this means the first milk, which for a very wise purpose is thin, purgative, and of a stimulating nature, is thrown back into the circulation.

That many of the errors remarked by Mr. White in the management of lying-in women too generally prevail, we are fully convinced from our own experience; and it is, no doubt, with justice, that he imputes them in great measure to the large share which nurses have in directing the treatment of those patients; to whose interference, he observes, practitioners must often submit, though contrary to their own better judgment.

Concerning the cause of the puerperal fever, Mr. White is of opinion, that it cannot be ascribed to simple inflammation. The patients, he observes, complain chiefly of a tension, soreness, and tenderness of the belly, and are seldom affected with those excruciating pains which generally attend common inflammations of the bowels. That the disease evidently manifests itself to be of the putrid kind, and is a malignant fever of the same genus as the jail or hospital fever.

The second chapter treats of the miliary fever, from observations on which disease Mr. White deduces the following inferences.

\* 1. The miliary eruption of child-bed women is frequently a symptom attendant on fevers, caused by human effluvia, and by sweating, and never appears without a sweat preceding it.

\* 2. The precise time for the appearance of the eruption, cannot with tolerable certainty be fixed, it being common for one crop to be succeeded by more, and even sometimes to appear without any fever attending, or succeeding; and as by removing the disease in its early stage the eruption may be totally prevented, it cannot be called critical.

\* 3. The cooling and extinguishing method of cure (as it is called) cannot prove prejudicial in the early stages by checking

the eruption, if at the same time it removes the cause of the disease itself.

4. Puerperal women are not subject to this disease from any other cause, but that of their being in a state much inclined to putridity, attended with a relaxation of the skin, from sweating in bed.

5. Therefore, as the miliary eruption is never produced without sweat, and as neither the one nor the other can be said to be strictly critical, may we not conclude, that the eruption is occasioned by the cuticular secretions being increased by warmth and relaxation, and of course rendered more acrid, so that by lodging upon the skin, and communicating with the external air, they must soon acquire a putrid state, even if the patient had no signs of putrescency before?

In the third chapter, the author considers the milk fever, where he takes occasion to reprehend the custom of using stays, which, by pressing upon the nipple, reduces it to a flat form, and renders it incapable of being properly drawn in the puerperal state.

In the next chapter we are presented with general directions for the prevention of many disorders peculiarly incident to the pregnant state. As in this part of the work Mr. White recommends a prophylactic course somewhat different from ordinary practice, we shall lay his observations before the reader.

As soon as a woman has conceived, and a stop is put to the usual return of her menses, it has generally been imagined that most of her disorders, and the danger of miscarriage, arise principally from a plethora, and bleeding has almost constantly been prescribed. This mode of practice may be good in some cases, but it ought by no means to be adopted as a general rule, when we consider the customs of the present times. In the days of queen Elizabeth, when our ancestors breakfasted upon more substantial food, and lived a more active life than we do at present, inflammations and all those diseases which are incident to plethoric habits were extremely common in this island. With a change of diet and mode of living, it is well known we have experienced a change too of those diseases for such as are the constant attendants of relaxed and weak fibres.

There are few disorders of either sex which now require such copious bleedings, as they did half a century ago; for in less than that time a considerable alteration has taken place amongst us.

It is not probable that the catamenia are caused by a general plethora, but even if this were allowed, it would not  
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from thence follow that it is the certain attendant of the pregnant state. For if we consider the large quantity of blood which must necessarily go towards the support of the child, and the nausea, vomiting, and almost total loss of appetite which are the frequent concomitants of pregnancy in its early state, it will appear that if a plethora did at the very first exist, it must in many constitutions have a very short duration. I have known several ladies of delicate, tender, weak constitutions, with bad appetites, who never went to their full times when they were bled during pregnancy, and as constantly became the mothers of healthy children when that operation was omitted; so that the maxim of Hippocrates, that venesection in a pregnant woman will produce a miscarriage, especially if she be far gone, although by much too general, appears to be not so ill founded as has been lately supposed: especially if we consider the relaxed constitutions in the warm climate where he lived.

I have experienced the happy effects of giving asses milk, Pyrmont, and Seltzer waters, bark, and not only the dulcified, but the acid vitriolic elixir. I have known short rides on horseback repeated daily procure success when total confinement would not; and have for a great number of years been sensible of the good effects of cold bathing, not only in preventing miscarriages, when every other method has been likely to fail, but other disorders which are incident to pregnant women, and generally attendant upon a weak lax fibre. By cold bathing I do not mean the making use of a bath cold to the greatest extreme, but the use of such as that of Buxton, or at Matlock, of sea bathing, or bathing in a tub in the patient's own house, with the water a little warmed. I have frequently advised my patients to bathe every other day at a time when the stomach is not overloaded, and not to stay at all in the water; and from the success I have seen attend this practice in preventing miscarriages, and many of the disorders peculiar to the pregnant state, particularly nausea and vomiting, I am satisfied they are much seldomer to be attributed to a plethora than to weak lax fibres, and a sympathetic affection of the nerves from a distension of the uterus: and in these cases I have generally found that exercise, bark, elixir of vitriol, and Pyrmont waters, joined with cold bathing have had the best effect.

I am convinced that bleeding is too indiscriminately used, and too often repeated; and that though it may on some occasions give immediate relief, yet upon the whole it must aggravate the complaints, weaken the patients, and render them more liable to putrid diseases. But I would not  
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be understood to mean that bleeding is never necessary: in some habits and in inflammatory disorders it certainly is so, particularly if the patient complains of a sense of fullness, pain of the head and back, with a strong full pulse, &c. but even in plethoric cases unattended with inflammatory symptoms, asses milk, Seltzer water, elixir of vitriol and an active life answer the same purpose as bleeding; with this advantage, that they will obviate the present plethora without favouring its return, which is a strong objection to frequent bleeding; at the same time that they strengthen and brace the solids.

\* Riding on horseback, and indeed all kind of exercise must be avoided, when any symptoms of abortion appear; on that occasion, total rest and a recumbent posture are undoubtedly of the greatest consequence.

\* The keeping the intestinal canal open is an article of great importance; for this purpose vegetables and ripe fruit in large quantities may be allowed, bitter antiseptic purges in small doses should be given every, or every other night, and even aloetics (if the patient is not subject to the piles) mixed with other antiseptic resinous gums. The use of these will prevent the intestines from being plugged up by accumulations of hardened feces, whereby putrid flatulencies are generated. Gentle vomits may be administered with safety and advantage, in order to cleanse the stomach when necessary, and teas made of bitter antiseptic herbs may be drank daily: vegetable acids, columbo\*, and likewise neutral mixtures, taken during the act

\* Though the columbo-root has not yet made its way into any of the dispensatories, nor been mentioned by any author we are acquainted with, yet it has been given in England these thirty years, or more, in obstinate vomitings, and in many other complaints of the stomach and bowels. It was first brought to Manchester by a worthy apothecary, about five and twenty years ago, and has been constantly given ever since in bilious disorders of both sexes; he had it from Mr. Robinson of Richmond, a gentleman with whom he lived, who had given it for several years for such like complaints. Mr. Robinson brought it from the East Indies, and said the natives there frequently took about as much of the powder as would lie upon a six-pence in a glass of arrack, for the diseases I have mentioned, and it was generally attended with success.

\* Dr. Percival, whose merit as an author is sufficiently known to the medical world, has been so obliging to favour me with some useful experiments he has lately made upon this valuable drug, and which he intends in a short time to publish. The result of these experiments are, that columbo-root is inferior as an antiseptic to the Peruvian bark, in preserving animal flesh, but superior both to the bark, and to chamomile flowers, in preserving bile from putrefaction, and in restoring it when putrified. That an infusion of the bark when mixed with putrid gall and saliva instantly produced a coagulation of the gall, and considerably in-



of effervescence, which are all antiputrescents, operate to the same end, and are generally of great service in vomitings occasioned by a redundancy of acrid putrid bile. Raw eggs taken at any time during pregnancy, but especially at the latter end of it, are very serviceable (provided the stomach will bear them) in preventing and curing that temporary jaundice to which some women are liable. If the patient cannot take raw eggs, or the disorder should prove very obstinate, a small dose of calomel may be given with safety and advantage.

What chiefly merits attention in the above passages, is the article of bleeding, against the indiscriminate use of which in the complaints of pregnant women, we concur in our sentiments with the author. It is certain, however, that the method proposed by Mr. White, if not likewise governed by wholesome restrictions, might prove prejudicial in many cases. But a proper regard to the constitution, and particular circumstances of the patient, is, no doubt, always to be implied in every general injunction. It is to be wished, for the benefit of young practitioners, that Mr. White had specified the periods of pregnancy in which the cold bath might be used with advantage. We presume he means the earlier months; but even during that term, and when the cold bath appears to be indicated by a laxity of the fibres, is there not ground to apprehend, that abortion might sometimes be the consequence of that remedy? for women of very delicate constitutions, particularly in the time of gestation, are liable to be much affected by a smaller shock than is usually produced by the cold bath. The method of bathing, however, which Mr. White advises, is certainly less apt to excite extraordinary commotions than that of plunging into the water.

Mr. White recommends raw eggs taken at any time during pregnancy, but especially at the latter end of it, as very serviceable, provided the stomach will bear them, in preventing and curing the temporary jaundice to which some women are liable; and he informs us, that he himself has experienced the good effects of them in a similar complaint. We shall extract the case which he relates, and his probable solution of the manner in which the remedy acts.

creased the fætor of it; whereas an infusion of columbo united perfectly with, and very powerfully corrected its offensive smell. These experiments I think explain to us the mode of its action, and the reason of its success in bilious vomitings, and many other affections in the stomach and bowels, and point out to us what disorders it is likely to relieve and cure. Hence the doctor very justly infers, that the utility of the columbo-root must be evident in diseases of a putrid tendency, or in an impaired digestion from vitiated bile or corrupted saliva.

‘ It is not improbable that the temporary jaundice, to which women with child, new-born infants, and even adults of both sexes are frequently subject, owes its origin to the stoppage of the mouth of the ductus communis choledochus, by some tenacious gluten obstructing either totally or in part, the passage of the bile into the duodenum, and thereby occasioning its return into the blood. The attention I have paid to jaundiced patients of both sexes, and of every age, who have been cured by frequently taking raw eggs in cold spring water, has inclined me much to this opinion. My supposition is, that eggs act as a dissolvent of the gluten, obstructing the mouth of the duct, thereby opening a free passage for the bile into the duodenum. We know that yolks of eggs will destroy the tenacity of gums and resins, and render not only them, but also oils, and natural balsams, miscible with water.

‘ The first trial I had of this remedy was upon myself, about fourteen years ago, when I had been afflicted with the jaundice many weeks, and was much reduced, no bile having for a long time past into the intestines, when my skin was almost black, and after I had in vain taken large quantities of soap, madder, steel, rhubarb, and aloetic medicines. An officer of marines told me that if he might be allowed to prescribe, he would immediately cure me. I laughed at his proposal, when he informed me that some years before, in the Mediterranean, he was troubled with the same disorder to as great a degree as myself, and that after he had ineffectually tried all the remedies the surgeon of the ship could think of, a Spanish physician at Minorca had assured him he could cure him in a few days, by this simple prescription only,—two raw eggs, the whites as well as yolks, to be taken every morning in a glass of water fasting, with the addition of an egg every four hours during the day. That in three days after following this advice he began to perceive the bile in his stools, though none had appeared in them for many weeks before; that he immediately began to recover, and was very soon effectually cured. Upon considering the dissolvent property of yolks of eggs, and that eggs must at least afford a nourishment totally void of acrimony, I began to entertain a more favourable opinion of the recipe.

‘ I tried it, and found it had exactly the same effect which he had promised me. Though I was certain no bile had passed through me for six weeks before, upon taking the eggs only three days it began to flow, and in one day more in as great plenty as I could wish. I continued however to take them several months, and have never since had any return of the disorder.



• I have recommended the use of them to many persons under the same complaint, and have always had the satisfaction of finding their success, except in cases where the disorder was occasioned by a diseased liver, or by stones in the gall bladder.

The fifth chapter treats of Natural Births, particularly of the Secundines, and the Prevention of After-pains; and the sixth, of the Prevention of the Puerperal, Miliary, and Milk Fevers. For the purpose last mentioned, the method here recommended is chiefly an airy room, and a cool regimen. The subject of the next chapter is, the Cure of the Puerperal; and of the subsequent, the Cure of the Miliary Fever; of both which it is sufficient to observe, that Mr. White judiciously conducts his precepts upon the idea that these disorders proceed from a putrid cause, and are greatly aggravated by a hot regimen. To establish the truth of this remark, he presents us with several cases which lately fell under his own observation.

In a postscript to this treatise, the author impugns the arguments which have been produced to support the opinion of the puerperal fever proceeding from an inflammation of the intestines and omentum; and he lays before us a general account of the number of lying in women who have died in several hospitals for some years, with a view of confirming the opinion he entertains of the cause, the method of preventing, and curing the puerperal fever.

We cannot conclude our Review of this treatise, without acknowledging that Mr. White has elucidated the pernicious effects of a hot regimen in the puerperal state, by more positive, explicit, and satisfactory observations than we find in the writings of other authors. His arguments for establishing the putrid nature of the fever of child-bed women, are not only deduced from the laws of the animal economy, but confirmed by experience; and there is reason to expect, that the prophylactic directions he inculcates will be productive of the most salutary consequences.

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V. *Memoirs of the Life of the Reverend George Whitefield. M. A. late Chaplain to the Right Honourable the Countess of Huntingdon: in which every Circumstance worthy of Notice, both in his private and public Character, is recorded. Faithfully selected from his original Papers, Journals, and Letters. By the Rev. John Gillies, D. D. 8vo. 4s. boards. Dilly.*

**W**E shall spare ourselves the trouble of epitomizing these Memoirs, as we have already given our readers some particulars of Mr. Whitefield's life, in our account of a sermon.

mon, preached a little time after his death by Mr. John Wesley.

This work is said to be faithfully collected from Mr. Whitefield's original papers, letters, and journals; and to contain an account of every circumstance worthy of notice, both in his private and public character.

We shall take the author's word for his fidelity; especially as his compilation seems to be drawn up with great accuracy, and has all the marks of authenticity. But we can experimentally affirm, that he is sufficiently circumstantial in his detail; for he gives us an account of almost all Mr. Whitefield's motions by land and sea, his religious calls and impressions, his charitable donations, his travels, his preachings, his sufferings.—Nay, on some occasions, he condescends to tell us, that he had no appetite, that he got little sleep, that he was troubled with continual vomitings, and the like. *Men of letters* may look upon some of these things as trivial circumstances, not worth recording; but *the friends of Methodism* will think them necessary traits in the character of this heroic saint. Indeed this work is, in every respect, more calculated for the latter, than the former. For Mr. Whitefield was not a man of any distinction in the republic of learning; his life therefore admits of no literary anecdotes, such as we find in the lives of Erasmus, Grotius, Tillotson, Clarke, and many others of inferior note. His sphere of action was not so elevated. His connections were chiefly with the poor and illiterate. His occupation, that of an itinerant preacher. An attempt, we confess, to reform the world is a godlike employment. And we really believe, that Mr. Whitefield's zeal and activity arose from the most laudable motives, the love of God and man. But when we look into his printed sermons, we are at a loss to conceive what there was in his preaching, that could attract those amazing crowds which usually attended him. His discourses contain some few serious and rational exhortations; but the greatest part of them is made up of trifling observations, ludicrous stories, incoherent effusions, and pitiful rhapsody. The eclat of this gospel-trumpeter reminds us of the following lines:

By the loud trumpet which our courage aids,  
We learn that sound, as well as sense persuades.

The reader will, undoubtedly, be entertained with the following account of Mr. Whitefield's preaching in Moorfields, in the year 1742.



From this principle of compassion to perishing souls, he now ventured to take a very extraordinary step. It had been the custom for many years past, in the holiday seasons, to erect booths in Moorfields, for mountebanks, players, puppet-shows, &c. which were attended from morning till night, by innumerable multitudes of the lower sort of people. He formed a resolution to preach the gospel among them; and executed it. On Whit-Monday, at six o'clock in the morning, attended by a large congregation of praying people, he began. Thousands, who were waiting there, gaping for their usual diversions, all flocked round him. His text was John iii. 14. They gazed, they listened, they wept: and many seemed to be stung with deep conviction for their past sins. All was hushed and solemn. "Being thus encouraged, (says he) I ventured out again at noon, when the fields were quite full; and could scarce help smiling, to see thousands, when a merry-andrew was trumpeting to them, upon observing me mount a stand on the other side of the field, deserting him, till not so much as one was left behind, but all flocked to hear the gospel. But this, together with a complaint that they had taken near twenty or thirty pounds less that day than usual, so enraged the owners of the booths, that when I came to preach a third time in the evening, in the midst of the sermon, a merry-andrew got up upon a man's shoulders, and advancing near the pulpit, attempted to lash me with a long heavy whip several times. Soon afterwards they got a recruiting serjeant, with his drum, &c. to pass through the congregation. But I desired the people to make way for the king's officer, which was quietly done. Finding these efforts to fail, a large body, quite on the opposite side, assembled together, and having got a great pole for their standard, advanced with sound of drum, in a very threatening manner, till they came very near the skirts of the congregation. Uncommon courage was given both to preacher and hearers. I prayed for support and deliverance, and was heard. For just as they approached us with looks full of resentment, I know not by what accident, they quarrelled among themselves, threw down their staff, and went their way, leaving, however, many of their company behind, who, before we had done, I trust were brought over to join the besieged party. I think I continued in praying, preaching, and singing, (for the noise was too great at times to preach) about three hours. We then retired to the Tabernacle, where thousands flocked. We were determined to pray down the booths; but blessed be God, more substantial work was done. At a moderate computation, I received (I believe) a thousand notes from persons

sons under conviction; and soon after, upwards of three hundred were received into the society in one day. Some I married, that had lived together without marriage. One man had exchanged his wife for another, and given fourteen shillings in exchange. Numbers, that seemed as it were to have been bred up for Tyburn, were at that time plucked as fire-brands out of the burning."

"I cannot help adding, that several boys and girls, who were fond of sitting round me on the pulpit, while I preached, and handing to me people's notes, though they were often pelted with eggs, dirt, &c. thrown at me, never once gave way; but, on the contrary, every time I was struck, turned up their little weeping eyes, and seemed to wish they could receive the blows for me. God make them, in their growing years, great and living martyrs for him, who out of the mouth of babes and sucklings perfects praise."

We hope that Mr. Whitefield, in this quotation from the evangelist, did not think of any comparison between himself and our Saviour: he seems, however, to have been extremely pleased with the impressions, which he supposes he had made upon *young children*. In Wesley's Sermon we are informed, that, after Mr. Whitefield's preaching at Savannah, June 6, 1741, 'the *little children* returned home, crying along the street, and some could not help praying aloud; that their groans and cries continued all night, and great part of the next day.' Instead of alluding to the words of our Saviour, on this occasion, or attributing the groans of these little children to the power of Mr. Whitefield's preaching, we should ascribe them to fatigue and hunger; both of which might very probably be owing to their attendance on the preacher, and the avocation of their parents from the care of their families.

At Boston, we are likewise told by Dr. Gillies, 'that *little children* were impressed.' And this writer immediately adds, 'the *contributions* were very considerable, amounting in town and country to near five hundred pounds sterling.'—Well then might the children *groan*, when their fathers were giving away their bread! To suppose, that they groaned or cried out of conviction, or for the burthen of their sins, is a piece of fanaticism, of which we have no conception.



VI. *A New Geographical and Historical Grammar; containing, the true astronomical and geographical Knowledge of the terraqueous Globe: and also the modern State of the several Kingdoms of the World; under these four Heads: I. The Astronomy of the Solar System, and particularly of the Earth. II. Universal Geography, shewing the divers Circumstances relating to the Earth, Water, and Atmosphere. III. Geographical Elements, exemplified in Definitions, Problems, Theorems, and Paradoxes. IV. Particular Geography, concerning the Natural and Political Parts of Europe, Asia, Africa, and America. Illustrated with Twenty-five Maps and Plates, elegantly executed. By Mr. Salmon. The 12th Edition, with great Amendments and Improvements, by Mr. Robertson. 8vo. 7s. 6d. Cadell.*

THE mind of man being naturally inquisitive after novelty, those works which set before us the customs and policy of distant nations, and, by bringing us acquainted with other particulars concerning them, gratify our curiosity, will always meet with a favourable reception. The avidity with which the narratives of travellers are sought after, sufficiently evinces that their informations are acceptable; but to young readers, and to those who have not much leisure, the comparing of the various, and sometimes contradictory, accounts, given by different travellers, is a task which it is not in their power properly to execute. The usefulness, therefore, of works in which the fictions and errors of travellers are omitted, and those particulars which are most worthy of notice, digested into order, is evident; and a Geographical Grammar, of a moderate size, properly executed, may diffuse as much general knowledge of the several nations of the world, as can be done by all the books of travels extant; we say general knowledge, as it is impossible in such a work to relate every particular which may be thought worth observation; and to those who are desirous of acquiring an intimate knowledge of every part of the world, it must be useful to have a summary of the information they are laboriously collecting, which may be easily referred to. Systems of geography, therefore, have been formed on various plans; but, without stopping to consider their particular merits, we may venture to affirm that few or none of them have been found of such general utility as Salmon's Grammar; at least in what regards modern history. This work the present editor has undertaken to improve; and we shall now examine how he has succeeded.

Mr. Salmon's account of the solar system and general geography is not sufficiently explicit for beginners; but in the  
Vol, XXXIV. Nov. 1772. A a pre-

present edition they are treated of much more at large, under the titles of Popular Astronomy, and Universal Geography, and explained in so familiar a manner, that those who were before entirely unacquainted with those studies may easily understand, or at least obtain such distinct ideas of whatever relates to them, as to be able to account for various phenomena of which the vulgar retain ridiculous notions.

The ingenious Fontenelle is deservedly commended for having facilitated the study of astronomy, in his *Plurality of Worlds*. The editor of the work before us studies to convey his instructions with like simplicity, and removes the prejudices which ignorant readers are apt to entertain, in a way exactly suited to their capacities.

• That it may not appear strange to beginners, says he, that the stars are to be numbered, the following experiment is proposed for their consideration. Suppose a large surface, such as a sheet of paper, was by a brush dipped in ink to sprinkled with a very great number of spots: if this paper was to be divided into small squares and numbered, the spots in each square may be easily reckoned, and the number of them finally collected. Or instead of dividing the surface into squares, if any other figures were drawn on the paper, including some more, some fewer spots, their number might thus be collected; and in somewhat like manner were the stars lying in the neighbourhood of one another, in very early ages of the world, supposed to be circumscribed by the out-lines of men, beasts, or other figures; which might, perhaps, be intended to perpetuate the memory of persons eminent for some qualities known to one or more nations, or be as mystical signs of some practices used in their religious ceremonies.

In treating of the planets he has enabled the student to form a proper idea of their annual and diurnal motions by the following experiment.

• Let a string of some length be run through the middle of a ball of any hard substance (such as the ball of a catcher) spin the ball strongly from right to left by the finger and thumb, holding fast the other end of the string, and while the ball is spinning in this pendant manner, let it be gently moved in a circular manner from right to left round the flame of a candle standing on the floor; then the motion round the candle, representing the sun, will shew the nature of the annual motion, and the spinning round its axis will shew the nature of the diurnal motion, the candle will enlighten that half of the ball turned towards it, while the opposite half will be in darkness; the string through the ball represents its axis, and the two points at the extremities of the axis on the ball's



ball's surface are called the poles. In a manner somewhat like this the earth turns quite round its axis once in twenty-four hours, with an uniform rotation, whereby every point on its surface will be in constant motion from right to left, or from west to east, except the two points called the poles of the earth, these being, as it were the centers of motion, remain at rest; and as one half of the earth is always enlightened, the boundary of the illuminated part is a circle which may be called the terminator, as it is the limit between light and darkness.—Whatever relates to general geography is here made as intelligible as possible, and the best authorities are produced as proofs of what is advanced; some of these authorities being very recent have not before appeared in any publication of this kind.

When our editor comes to speak of the saltness of the sea, he quotes Dr. Halley's opinion concerning it, 'That all the lakes in the world, properly so called, are found to be salt; some more, some less than the ocean, which in the present case may also be esteemed a lake, since by that term is meant such standing waters as perpetually receive rivers running into them, and have no exit or evacuation, but what is exhaled by heat; and having enumerated the lakes he had received accounts of, he conceives that all the lakes mentioned do receive rivers, and have no discharge but by exhalation, so it will be necessary that their waters rise until such time as their surfaces are sufficiently extended, so as to exhale in vapour as much water as is poured in by the rivers; and consequently the lakes must be bigger or lesser, according to the quantity of the fresh water they receive. But the vapours thus exhaled are perfectly fresh, so that the saline particles that are brought in by the rivers remain behind, while the fresh only evaporates: and hence it is evident that the salt in the lakes will be continually augmented, and the water grow saltier and saltier; but in lakes where the water runs off as fast as the fresh water rivers supply them, the saline particles are too few to be perceived.

'Now if this be the true reason of the saltness of lakes, it is not improbable but that the ocean itself is become salt from the same cause.'

We very much doubt the justness of this opinion, as it is not likely that there are more than three or four rivers which do discharge themselves into the sea; those only can, whose water runs fresh quite to the sea when the tide flows out; others only pour back the sea-water which the tide carries into them, and are never fresh within a very considerable distance

from the sea, losing part of their water by exhalations, and part by what is soaked into the earth in their passage.

At the conclusion of what is here called Universal Geography, we have a variety of geographical theorems, and of paradoxes with their solutions, which cannot fail of being useful, by setting before the student in a new light what had before been taught him.

We ought not to omit mentioning that Mr. Robertson has prefixed to the astronomical part of his work, a plate designed to convey to beginners a notion of some kinds of systems, of which it is imagined the universe may be composed, and which affords no very imperfect representation thereof, according to the ideas we have of them.

The first thing remarkable in that part of the work entitled Particular Geography, is the copiousness of the several tables, in which the divisions of the different parts of the world are distinctly and accurately arranged; and herein Mr. Robertson has made very great improvements upon his author.

The following is his first grand division of Europe, in which E. stands for empire, K. for kingdom, R. for republic, and S. for states.

Countries.	Posit.	Religion	Capital Cities.	Clim.
K. Spain	SW	Papists	Madrid	VI
K. Portugal	SW	Papists	Lisbon	VI
K. France	W	Papists	Paris	IX
K. Sardinia	S	Papists	Turin	VIII
S. Italy	S	Papists	Rome	VII
K. Sicilies	S	Papists	Naples	VII
R. Switzerland	Mid.	Protest. & Pap.	Bern	VIII
Austr. Netherl.	W	Papists	Brussels	IX
R. United Provinces	W	Protestants	Amsterdam	IX
E. Germany	Mid.	Protest. & Pap.	Vienna	VIII
K. Bohemia	Mid.	Papists	Prague	IX
K. Hungary	E	Papists	Presburg	IX
K. Poland	Mid.	Papists	Warsaw	IX
K. Prussia	NW	Protestants	Berlin	IX
E. Russia	NE	Greek Church	Petersburg	XI
K. Sweden	N	Protestants	Stockholm	XI
K. Denmark	NW	Protestants	Copenhagen	X
K. Norway	NW	Protestants	Bergen	XI
E. Turkey	SE	{ Mahometans Christ & Jews }	Constantinople	VII
K. England	W	Protestants	London	IX
K. Scotland	W	Protestants	Edinburgh	X
K. Ireland	W	Protest. & Pap.	Dublin	IX



We shall also copy his first division of Spain.

Division.	Provinces.	Situat.	Chief Towns.	Latitude.	Long.
Northern	Gallicia	NW	Compostella	43 00 N	9 15 W
	Asturia	N	Oviedo	43 30	6 40
	Biscay	N	Bilboa	43 30	3 00
Eastern	Navarre	NE	Pampeluna	43 15	1 30
	Aragon	ENE	Saragossa	41 32	1 15
	Catalonia	E	Barcelona	41 20	2 0 E
Southern	Valentia	E	Valentia	39 20	0 35 W
	Murcia	SE	Murcia	38 6	1 15
	Granada	S	Granada	37 15	3 40
	Andalusia	S	Seville	37 15	6 0
Middle	Old Castile	M	Burgos	43 30	4 5
	New Castile	M	Madrid	40 30	4 15
	Leon	M	Leon	43 0	6 5
	Estremadura	M	Merida	39 55	6 32
Spanish	Ivica	E	Ivica	39 0	1 0 E
Islands, to Britain	Majorca	E	Majorca	39 30	2 30 E
	Minorca	E	Citadella	40 0	3 30 E

After this manner are formed tables of the other quarters of the world and kingdoms, besides various copious tables of subdivisions in different forms, as are most suitable to each country, but which are much too extensive to have a place in our work.

To the accounts of the dress, manners, religion, government, genius, &c. of the different nations, Mr. Robertson has made considerable additions. These are so intermixed with the original materials as not to be easily separated; we shall therefore content ourselves with remarking that what he has added is by no means the least useful part of the work, as he seems to have been careful in collecting material information. The whole accounts are, indeed, still concise; but this must ever be the case in works of this nature, in which there is seldom room even to quote the authors' names from whom they are taken, especially as they are sometimes formed from a comparison of several; but we have as many particulars of that kind here as in any other body of geography we remember to have seen.

The historical part of this work Mr. Robertson has continued to the present time; and as the king of Prussia is extending his dominions, and is become a considerable potentate, Prussia is in this edition ranked with propriety as a separate kingdom, though the description of it has hitherto been included in that of Poland. As this portion is new, we shall transcribe it entire, believing it cannot be unacceptable.

## PRUSSIA.

*Situation and extent.* Between the latitudes of  $53\frac{1}{2}$  and  $54\frac{1}{4}$  degrees north, about 100 miles; and between the longitudes of 20 and 23 degrees east, about 160.

*Boundaries.* Bounded on the north by Samogitia; on the south by Warsovia and Great Poland; on the east by Lithuania; and on the west by the Baltic Sea and Polish Prussia.

*Rivers.* The chief rivers are the Vistula, the Memel, and the Pregel, besides some lakes. The country is subject to be sometimes overflowed by the rivers.

*Produce.* This is a very fertile country and produces much flax, hemp, corn, cattle, and game, such as are found in the neighbouring countries. They have elks, wild asses, and uri in the forests; these last are of a large size, somewhat like beeves, with thick hides, and sell for a great price to foreigners. Amber is also found in great plenty on the Baltic sea-coast of this country, especially after storms.

*Traffic.* The exports are naval stores, various manufactures in metal and glass, and some from the different looms. Amber, flax and hemp seeds, and various other articles, sufficient for the freight of near 500 ships, annually from Koningsburg.

*Capital.* The chief city is Koningsburg, standing near the sea, on the river Pregel, over which are seven bridges; the city is near seven miles in circuit, and contains about 50,000 inhabitants; it has eighteen churches, a magnificent palace, in which is a hall about 270 feet long and 60 broad, without columns to support the roof, and a good library; the place has a citadel called Fredericksburg: and the cathedral, town-house, and exchange, are fine buildings; and the city is embellished with several gardens.

*People.* This country is very populous, and has been reckoned to contain above half a million of males fit to bear arms; there have since the year 1719 settled in this country above 34,000 foreigners, who have built 400 villages, 11 towns, 86 seats, 50 new churches, and have founded about 1000 schools. The inhabitants are, in general, Protestants, and have much such customs, manners, and diversions as the people in the northern parts of Germany.

The territories of the king of Prussia are many and extensive, but the extreme parts lie at a great distance from one another; the several domains, with the chief towns, are contained in the following table.

Chief



Poland.			Chief Towns.
	Royal Prussia	Samland Natagen Hockerland	Koningsburg Brandenburg Marienwarder
Germany.	Upper Saxony	Brandenburg Pomerania Swed. Pomerania	Berlin Camin Stetin
	Lower Saxony	Magdeburg Halberstat	Magdeburg Halberstat
	Silesia	Crossen	Crossen
	Westphalia	Minden	Minden
		Ravensburg	Ravensburg
		Lingen	Lingen
		Cleves Meurs Mark	Cleves Meurs Han
	Netherlands Switzerland	Gelder Neufchatel	Gelders Neufchatel

\* *Revenues and military strength.* The dominions of his Prussian majesty are very conveniently situated for commerce, as well foreign as inland, and from the excellent regulations of various kinds instituted in the late, and particularly in the present reigns, there arise ample revenues to maintain a very great army, and to furnish astonishing resources, such as enabled the present king to triumph over the powers that brought such immense losses to him in the late wars.

\* The judicious regulations in the military department, entirely formed by his present majesty, furnish recruits as quick as can be wished; for each regiment has allotted to it a particular district, where all the young men, fit to bear arms, are registered, and when wanted, they join their regiment, and soon become well disciplined, by being well mixed with the veterans.

\* *Arms.* The royal arms of Prussia are, argent, an eagle displayed, sable, crowned, or, for Prussia; azure, the imperial sceptre, or, for Courland; argent, an eagle displayed, gules, with semicircular wreaths, for the marquise of Brandenburg. To these are added the respective arms of the several provinces subject to the Prussian crown.

\* *Orders of knighthood.* There are two orders of knighthood, the first that of the Black Eagle, instituted by Frederic I. in 1701, on the day of his coronation at Koningsburg, with this motto *Suum Cuique*; the sovereign is grand master, and the number of knights limited to thirty. The ribbon is orange, and the star azure, with eight points. The other order is that of Merit, founded by his present majesty, in 1740, with this

motto, *Pour Le Merite*; a star of eight points hangs to a black ribbon over the neck.

\* *Constitution.* His Prussian majesty is absolute through all his dominions, but tempers his power so as not to oppress his subjects. He has introduced a new code of laws, whereby suits are speedily determined with little expence to the contending parties. The government is disposed under the different departments of chancellors, councils, and bailiwicks, the states, and a board of navigation and commerce.

\* *History.* The Prussians appear to have been a brave and warlike people, and refused the terms of slavery, to which some neighbouring princes wanted to reduce them, under the pretence of converting them to Christianity; Boleslaus, the fourth king of Poland, was by them defeated, and slain in the year 1163. About the year 1230 the German Teutonic knights undertook the conversion of the Prussians by the powerful help of the sword; the property of the country was to be the reward of their zeal in the prosecution of this pious design, most of the inhabitants were extirpated and Germans substituted in their stead, who, by a treaty with Casimir, king of Poland in 1466, were established; Polish Prussia to be a free province, under the king's protection, and the other part to be held by the knights in vassalage to Poland. The knights, not brooking the vassalage, endeavoured to render themselves independent, but could not effect it; however, their last grand master, Albert, margrave of Brandenburg, was, by the treaty of Cracow, in 1525, acknowledged duke of the eastern part of Prussia, and since called Ducal Prussia, and to be continued in his family, and thus ended the Teutonic Order in Prussia, having subsisted about 300 years. The elector of Brandenburg, Frederic-William the Great, had Ducal Prussia confirmed to him, and being freed of vassalage soon after, he and his descendents became independent sovereigns of that part of Prussia.

\* The margrave Albert being a Protestant, this religion was introduced into Prussia, and has since continued there. In 1700 the elector Frederic, the son of Frederic-William the Great, was raised to the dignity of king of Prussia, by the states of the empire, and acknowledged as such by the Christian powers. His son Frederic-William, who succeeded to the crown in 1713, did great service to his people, though sometimes attended with a want of that humanity, which renders a king dear to his subjects. However, at his death, in 1740, he left, in his treasury, it is said, about seven millions sterling, which contributed towards enabling his son, the present king, to perform such acts, as have astonished the whole world.



world. It must be known that to a rich treasury, and fruitful resources, the present king joined a magnanimous soul, assisted by the choicest intellects; and as a hero, legislator, and philosopher, will be ranked among the greatest personages celebrated by future writers.

His majesty has gathered a large army on the frontiers of Poland, judging it necessary for the defence of his own dominions, during the distracted state of that kingdom, which may probably terminate in its loss of that freedom, which, through the capricious humour of a few, does entail misery on millions.

The late wars in Silesia having reduced many families to great distress, by the incumbrances with which their estates were necessarily loaded; his majesty, by a most noble donation, has discharged those debts; some whereof amounted to between thirty and forty thousand rixdollars. Such an act of benevolence must secure the most unfeigned attachment to their sovereign.

We shall conclude this article by recommending this improved edition of Salmon's Grammar to those who are desirous of acquiring a knowledge both of general geography, and of the several nations in the world.

VII. *Domestic Medicine: or, a Treatise on the Prevention and Cure of Diseases by Regimen and simple Medicines.* By William Buchan, M. D. 8vo. 6s. Cadell.

OF all the treatises which have been published with the intention of diffusing a competent knowledge of medicinal precepts among those who are unacquainted with the principles of the Esculapian art, the production now before us is unquestionably the most extensive in its plan, as it not only contains the cure both of acute and chronic diseases, but also the rules for preventing them. With respect to the assemblage of useful observations, it may be likewise reckoned the most copious; and these seem frequently to be drawn from the author's own experience, as well as from the writings of others. He informs us, that he had concerted, and even executed a great part of his design before Tissot's *Avis au Peuple* appeared in this country; otherwise, that the present performance had, probably, never seen the light. This confession reflects equal honour on the candour of our author, and the merit of Tissot's celebrated work: but to whatever degree of praise the *Avis au Peuple* is entitled, in point of execution, it certainly anticipated only in part the treatise now under our

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consideration; for it included not the subject of chronic diseases, which was the province best adapted to the general comprehension of the public, but also treated too superficially of the prophylactic department of medicine, another of the most essential objects of a work of this kind.

The author acquaints us, that when he first signified his intention of publishing this treatise, he was told by his friends it would draw on him the resentment of the whole faculty. But as he could not entertain such an unworthy idea of physicians, he was resolved to make the experiment; the consequence of which was, that by the more selfish and narrow-minded part of the faculty, the performance was condemned; while, on the contrary, it was received with candour by all such as were distinguished for their learning and liberality of sentiment. Illiberal indeed, and malignant, must have been those members of the profession, who could look with an invidious eye on the publication of a treatise, which was calculated to instruct the whole body of the people in the method of curing their own diseases, and securing to them the enjoyment of the most invaluable blessing of life! Should the design have proved even utterly subversive of the whole emoluments of the faculty, it must still have obtained the approbation of all benevolent men, who regarded the general happiness of their species, as an object of infinitely superior consideration to the interest of a few individuals. But, in fact, they who entertained such dismal apprehensions of the annihilation of the medical employment, must, it is to be presumed, have had as confined a knowledge of the science they professed, as of the natural disposition of mankind. In obstinate bodily complaints, or such as are supposed to be attended with any degree of danger, people will always be inclined to have recourse to the assistance of those men who have particularly devoted themselves to the study of physic; and this renunciation of their own private judgment will but too often be found necessary, even by such as have most attentively perused the directions which are delivered in a work professedly intended for the use of mankind in general. Instead of apprehending, therefore, the extinction of the medical tribe, there seems rather to be ground for prognosticating an encrease of their prosperity from the publication of a treatise of this kind. It is certain, as our author observes, that the veil of mystery, which still hangs over medicine, renders it a suspicious art; and nothing can tend more to the honour of the science, than the expedient of submitting its principles to public examination.



We shall lay before our readers a few of the author's arguments in justification of the work.

\* I know it will be said, that diffusing medical knowledge among the people, might induce them to tamper with medicine, and to trust to their own skill instead of calling a physician. The reverse of this, however, is true. Persons who have most knowledge in these matters, are commonly most ready both to ask and follow advice, when it is necessary. The ignorant are always most apt to tamper with medicine, and have the least confidence in physicians. Instances of this are daily to be met with among the ignorant peasants, who, while they absolutely refuse to take a medicine which has been prescribed by a physician, will swallow, with greediness any thing that is recommended to them by their credulous neighbours. Where men will act even without knowledge, it is certainly more rational to afford them all the light we can, than to leave them intirely in the dark.

\* It will also be alledged, that laying medicine more open to mankind would lessen their faith in it. This would indeed be the case with regard to some individuals; but it would have a quite contrary effect upon others. I know many people who have the utmost dread and horror of every thing prescribed by a physician, but who will, nevertheless, very readily take a medicine which they know, and whose qualities they are in some measure acquainted with. Hence it is evident, that the dread arises from the doctor, not from the drug. Nothing ever can or will inspire mankind with an absolute confidence in physicians, but an open, frank, and undisguised behaviour. As long as the least shadow of mystery remains in the conduct of the faculty, doubts, jealousies, and suspicions will arise in the minds of men.

\* No doubt, cases will sometimes occur, where a prudent physician may find it expedient to disguise a medicine. The whims and humours of men must be regarded by those who mean to do them service; but this can never affect the general argument in favour of candor and openness. A man might as well alledge, because there are knaves and fools in the world, that he ought to take every one he meets for such, and to treat him accordingly. A sensible physician will always know where disguise is necessary; but it ought never to appear on the face of his general conduct.

\* The appearance of mystery in the conduct of physicians not only renders their art suspicious, but lays the foundations of quackery, which is the very disgrace of medicine. No two characters can be more different than that of the honest physician and the quack; yet they have generally been very much confounded. The line betwixt them is not sufficiently apparent; at least it is too fine for the general eye. Few persons are able to distinguish sufficiently between the conduct of that man who administers a secret medicine, and him who writes a prescription in mystical characters and an unknown tongue. Thus the conduct of the real physician, which needs no disguise, gives a sanction to that of the villain, whose whole success depends upon secrecy.

\* No laws will ever be able to prevent quackery, as long as people believe that the quack is as honest a man, and as well qualified as the physician. A very small degree of medical knowledge, however, would be sufficient to break this spell; and nothing else can effectually undeceive them. It is the ignorance and credulity of the multitude, with regard to medicine, which renders them such

an easy prey to every one who has the hardiness to attack them on this quarter. Nor can the evil be remedied by any other means but by making them wiser. Indeed, the most effectual way to destroy quackery in any art or science, is to diffuse the knowledge of it among mankind. Did physicians write their prescriptions in the common language of the country, and explain their intentions to the patient, as far as he could understand them; it would enable him to know when the medicine had the intended effect; would inspire him with absolute confidence in the physician; and would make him dread and detest every man who pretended to cram a secret medicine down his throat.

Whatever prejudice this treatise may have excited among such of the faculty as are actuated by sordid motives, it would appear that the public had received it with uncommon approbation and avidity; for we are told that an impression, of no less than five thousand copies, was sold in a corner of Britain before another edition could be got ready. In that now before us, the author has enlarged the *prophylaxis*, or that part which treats of preventing diseases, and likewise added several diseases which had been entirely omitted in the former impression.

Having said thus much of the nature of the work in general, we shall now proceed to a more particular account of it; and we hope for the indulgence of our readers if the importance of the subject should lead us into a more copious detail than is usually allotted to a single article.

The work is divided into two parts, the latter of which treats of diseases, and the first, of their general causes. It commences with a view of the common treatment of mankind in the state of infancy; that period of our lives in which the foundation of a good or bad constitution is generally laid. Most of Dr. Buchan's observations on this important subject were made in the Foundling-Hospital at Ackworth, and communicated to the public above a dozen years ago, in a small pamphlet addressed by him to the governors of that hospital. But as that performance is probably but little known to the generality of our readers, it seems adviseable to submit again to the public attention the valuable remarks it contains.

Our author makes the melancholy observation, that, as appears from the annual registers of the dead, above one half of the children born in Great Britain die under twelve years of age; and though to many this may appear a natural evil, yet, on due examination, it will be found to be one of our own creating. Were the death of infants, says he, a natural evil, other animals would be as liable to die young as man; but this we find is by no means the case. In accounting for this great mortality he observes, that if parents are above taking care of their children, others must be employed for that purpose,



pose, who will always endeavour to recommend themselves by the appearance of extraordinary skill and address; by which means a number of unnecessary and destructive articles have been introduced into the diet, cloathing, &c. of infants. He pretends not, however, to impose upon every mother the task of suckling her own child, which, whatever speculative writers may alledge, he admits to be in many cases impracticable, and would inevitably prove destructive both to the mother and child; but when it can be done without any prejudice to her health, he thinks she certainly ought to perform so tender and agreeable an office. His observations on the general neglect of the proper management of children, are so just and striking that we are induced to give them a place in our Review.

‘ It is indeed to be regretted, that more care is not bestowed in teaching the proper management of children to those whom nature has designed for mothers. This, instead of being made a principal, is seldom considered as any part of female education. Is it any wonder, when females, so educated, come to be mothers, that they should be quite ignorant of the duties belonging to that character? However strange it may appear, it is certainly true, that many mothers, and those of fashion too, are as ignorant, when they have brought a child into the world, what to do for it, as the infant itself. Indeed, the most ignorant of the sex are generally reckoned most knowing in the business of nursing. Hence, sensible people become the dupes of ignorance and superstition; and the nursing of children, instead of being conducted by reason, is the result of whim and caprice.

‘ Were the time that is generally spent by females in the acquisition of trifling accomplishments, employed in learning how to bring up their children; how to dress them so as not to hurt, cramp, or confine their motions; how to feed them with wholesome and nourishing food; how to exercise their tender bodies, so as best to promote their growth and strength: were these made the objects of female instruction, mankind would derive the greatest advantages from it. But, while the education of females implies little more than what relates to dress and public shew, we have nothing to expect from them but ignorance, even in the most important concerns.

‘ Did mothers reflect on their own importance, and lay it to heart, they would embrace every opportunity of informing themselves of the duties which they owe to their infant-offspring. It is their province, not only to form the body, but also to give the mind its most early bias. They have it very much in their power to make men healthy or valetudinary, useful in life, or the pests of society.

‘ But the mother is not the only person concerned in the management of children. The father has an equal interest in their welfare, and ought to assist in every thing that respects either the improvement of the body or mind.

‘ It is a pity that the men should pay so little regard to this matter. Their negligenc is one reason why females know so little of it. Women will ever be desirous to excel in such accomplishments

as recommend them to the other sex. But men generally keep at such a distance from even the smallest acquaintance with the affairs of the nursery, that many would esteem it an affront, were they supposed to know any thing of them. Not so, however, with the kennel or the stables: a gentleman of the first rank is not ashamed to give directions concerning the management of his dogs or horses, yet would blush were he surprised in performing the same office for that being who derived its existence from himself, who is the heir of his fortunes, and the future hope of his country.

Even physicians themselves have not been sufficiently attentive to the management of children: that has been generally considered as the sole province of old women, while men of the first character in physic have refused to visit infants even when sick. Such conduct in the faculty has not only caused this branch of medicine to be neglected, but has also encouraged the other sex to assume an absolute title to prescribe for children in the most dangerous diseases. The consequence is, that a physician is seldom called till the good women have exhausted all their skill; when his attendance can only serve to divide the blame and appease the disconsolate parents.

One great source of the diseases of children, our author observes, is the unhealthiness of parents; for that it would be as reasonable to expect a rich crop from a barren soil, as that strong and healthy children should be born of those, whose constitutions have been worn out with intemperance or disease. The next article of importance respecting the health of children, is that of cloathing, concerning which our author abounds with many excellent remarks. He observes, that nature knows no other use of clothes to an infant, but to keep it warm; all that is necessary for the purpose is, to wrap it in a soft loose covering; but that the dressing of the child being considered as the province of the midwife, she imagines, that the more dexterity she can shew in this article, the more her skill will be admired; and her attempts being seconded by the vanity of the parents, as much finery as possible is heaped on the tender infant. He inveighs particularly, and with great justice, against the use of stays, and swaddling bands.

Among brute animals, says he, no art is necessary to procure a fine shape. Though many of them are extremely delicate when they come into the world, yet we never find them grow crooked for want of swaddling bands. Is nature less generous to the human kind? No: but we take the business out of her hands.

Not only the analogy of other animals, but the very feelings of infants tell us, that they ought to be kept easy and free from all pressure. They cannot indeed tell their complaints, but they can shew signs of pain; and this they never fail to do, by crying, when pinched by their clothes. No sooner are they freed from their bracings, than they seem pleased and happy; yet, strange infatuation! the moment they hold their peace, they are again committed to their chains.



“ If we consider the body of an infant as a bundle of soft pipes, replenished with fluids in continual motion, the danger of pressure will appear in the strongest light. Nature, in order to make way for the growth of children, has formed their bodies soft and flexible; and, lest they should receive any injury from pressure in the womb, has surrounded the foetus every where with fluids. This shews the care which nature takes to prevent all unequal pressure on the bodies of infants, and to defend them against every thing that might in the least cramp or confine their motions.

“ Even the bones of an infant are so soft and cartilaginous, that they readily yield to the slightest pressure, and easily assume a bad shape, which can never after be remedied. Hence it is, that so many people appear with high shoulders, crooked spines, and flat breasts, who were as well proportioned at their birth as others, but had the misfortune to be squeezed out of shape by the application of stays and bandages.

“ Pressure, by obstrueting the circulation, likewise prevents the equal distribution of nourishment to the different parts of the body, by which means the growth becomes unequal. One part of the body grows too large, while another remains too small; and thus in time the whole frame becomes disproportioned and mishapen. To this we must add, that when a child is cramped in its clothes, it naturally shrinks from the part that is hurt; and, by putting its body into unnatural postures, it becomes deformed by habit.

“ Deformity of body may indeed proceed from weakness or diseases; but, in general, it is the effect of improper clothing. Nine tenths, at least, of the deformity amongst mankind, must be imputed to this cause. A deformed body is not only disagreeable to the eye, but by a bad figure both the animal and vital functions must be impeded, and of course health impaired. Hence few people, remarkable mishapen, are strong or healthy.

“ The new motions which commence at the birth, as the circulation of the whole mass of blood through the lungs, respiration, the peristaltic motion, &c. afford another strong argument for keeping the body of an infant free from all pressure. These organs not having been accustomed to move, are easily stopped; but, when this happens, death must ensue. Hardly any method could be devised more effectually to stop these motions than bracing the body too tight with rollers, bandages, &c. Were these to be applied in the same manner to the body of an adult, for an equal length of time, they could hardly fail to hurt the digestion and make him sick. How much more hurtful they must prove to the tender bodies of infants, we shall leave any one to judge.

“ Whoever considers these things will not be surprised, that so many children die of convulsions soon after the birth. These fits are generally attributed to some inward cause; but, in fact, they oftner proceed from our own imprudent conduct. I have known a child seized with convulsion-fits, soon after the midwife had done swaddling it, who, upon taking off the rollers and bandages, was immediately relieved, and never had any convulsion fits afterwards. Numerous examples of this might be given, were they necessary.

“ It would be safer to fix on the clothes of an infant with strings than pins, as these often gall and irritate their tender skins, and occasion convulsions. Pins have been found sticking above half an inch into the body of a child after it had died of convulsion-fits, which, in all probability, proceeded from that cause.

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Children are not only hurt by the tightness of their clothes, but also by the quantity. Every child has some degree of fever after the birth; and, if it be loaded with too many clothes, the fever must be increased. But that is not all; the child is generally laid in bed with the mother, who is often likewise feverish; to which we may add the heat of the bed-chamber, the wines, and other heating things, too frequently given to children immediately after the birth. When all these are combined, which does not seldom happen, they must increase the fever to such a degree as will endanger the life of the infant.

The danger of keeping infants too hot, will further appear, if we consider, that, after they have been for some time in the situation mentioned above, they are often sent into the country to be nursed in a cold house. Is it any wonder, if a child, from such transition, catches a mortal cold, or contracts some other fatal disease? When an infant is kept too hot, its lungs, not being sufficiently expanded, are apt to remain weak and flaccid for life; from hence proceed coughs, consumptions, and other diseases of the breast.

It would answer little purpose to specify the particular pieces of dress proper for an infant. These will always vary in different places, according to custom and the humour of parents. The great rule to be observed is, "That a child have no more clothes than are necessary to keep it warm, and that they be quite easy for its body."

Stays are the very bane of infants. A volume would not suffice to point out all the bad effects of this ridiculous piece of dress. The madness in favour of stays seems, however, to be somewhat abated; and it is to be hoped the world will, in time, become wise enough to know, that the human shape does not solely depend upon whalebone and bend-leather.

With respect to the clothes of children, Dr. Buchan observes, that they ought to be kept very clean; for that children perspire more than adults; and, if their clothes be not frequently changed, they prove hurtful, not only by galling their tender skins, but likewise by their tendency to produce vermin and cutaneous diseases.

Having treated of what relates to the cloathing of infants, our author proceeds to consider their food, where he justly censures the practice of endeavouring to bring them up without the breast. He admits, that children may seem to thrive for a few months without the breast; but when seized with teething, the small-pox, or other diseases incident to the early period of life, they generally perish. This remark we have known to be confirmed by several cases within our own observation.

Dr. Buchan observes, that the natural debility of children has suggested the idea of their standing in need of cordials, and thence given rise to the custom of mixing wine with their first food. But nothing, he maintains, can be more fallacious than this way of reasoning, or more destructive than the ef-



feats resulting from it. For that children require very little food for some time after their birth; and what they receive should be thin, weak, light, and of a cooling quality. A very small quantity of wine, or even sugar, is sufficient to heat and inflame the blood of an infant; and for that reason, he thinks such articles of diet very improper in a state where most of the diseases proceed from a heat of the humours. Dr. Buchan recommends bread to be given to a child as soon as it discovers an inclination to chew; and proposes, that the quantity be limited only by its pleasure.

‘ The very chewing of bread, says he, will promote the cutting of the teeth, and the discharge of saliva, while, by mixing with the nurse's milk in the stomach, it will afford an excellent nourishment. Children discover an early inclination to chew whatever is put into their hands. Parents observe the inclination, but generally mistake the object. Instead of giving the child something which may at once exercise its gums and afford it nourishment, they commonly put into its hands a piece of hard metal or impenetrable coral. A crust of bread is the best gum-stick. It not only answers the purpose better than any thing else, but has the additional properties of nourishing the child and carrying the saliva down to the stomach, which is too valuable a liquor to be lost.

‘ Bread, besides being used dry, may be many ways prepared into food for children. One of the best methods is to boil it in water, afterwards pouring the water off, and mixing with the bread a proper quantity of new milk unboiled. Milk is both more wholesome and nourishing this way than boiled, and is less apt to occasion costiveness. For a child farther advanced, bread may be mixed in veal or chicken broth, made into puddings, or the like. Bread is a proper food for children at all times, provided it be plain, made of wholesome grain, and well-fermented; but, when enriched with fruits, sugars, or such things, it becomes very unwholesome.

‘ It is soon enough to allow children animal food when they have got teeth to eat it. They should never taste it till after they are weaned, and even then they ought to use it sparingly. Indeed, when children live wholly on vegetable food, it is apt to sour their stomachs; but, on the other hand, too much flesh heats the blood, and occasions fevers and other inflammatory diseases. This plainly points out a due mixture of animal and vegetable food as most proper for children.

‘ Few things are more hurtful to children, than the common method of sweetning their food. It entices them to take more food than they ought to do, which makes them grow fat and bloated. It is pretty certain, if the food of children were quite plain, that they would never take more than enough. The excesses of children are entirely owing to nurses. If a child be gorged with food at all hours, and enticed to take it, by making it sweet and agreeable to the palate, is it any wonder that such a child should in time be induced to crave more food than it ought to have?

‘ Children may be hurt by too little as well as too much food. After a child is weaned, it ought to be fed four or five times a day; but should never be accustomed to eat in the night; neither should it have too much at a time. Children thrive best with small quan-

tities of food frequently taken. This neither overloads the stomach, nor hurts the digestion, and is certainly most agreeable to nature.

Writers on nursing have inveighed with such vehemence against giving children too much food, that many parents, by endeavouring to shun that error, have run into the opposite extreme, and ruined the constitutions of their children. But the error of pinching children in their food is more hurtful than the other extreme. Nature has many ways of relieving herself when overloaded; but a child, who is pinched with hunger, will never become a strong or healthy man. That errors are frequently committed on both sides, we are ready to acknowledge; but where one child is hurt by the quantity of its food, ten suffer from the quality. This is the principal evil, and claims our strictest attention.

The author afterwards mentions the sorts of food improper for young children; which are, high-seasoned, salted, and smoke-dried, or fat meats, strong broths, rich soups, butter, unripe fruits, and roots which contain a viscid juice. Though Dr. Buchan prohibits children from so many articles of diet, he means not, however, that they should be confined to any particular kind, but that their food may be varied, provided sufficient regard be always had to simplicity; and he disapproves of the opinion of those who think it advisable, that the diet of children ought to be altogether moist. Because, when they live entirely upon slops, they become weak and relaxed, and contract a disposition to the rickets, the scrophula, and other diseases of the glands.

The exercise of children affords also much subject for our author's consideration; in treating of which, we meet with a remark concerning the origin of the rickets, that we do not remember to have ever seen suggested by any other writer. That disease first appeared in England about the middle of the last century; and though the procatarctic causes of it are now fully ascertained, yet physicians have hitherto been at a loss to determine the circumstances which influenced its primary invasion. The opinion that it was occasioned by a degeneracy of constitution, the result of encreasing luxury in diet, seemed not to be founded upon fact; as the children of those, among whom such gratifications most prevailed, were generally observed to be less frequently affected with the disease. Dr. Buchan imputes its origin to the establishment of manufactures, which introduced sedentary employments among the people; and we must acknowledge this conjecture receives some degree of probability, from the æra of the supposed morbid cause coinciding so nearly with that of the effect. Yet, were this entirely the cause, it may be asked, why the disease was formerly wholly unknown, though sedentary employments subsisted long before that period?

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For the manner in which children ought to be exercised, we would recommend to our readers the perusal of the treatise; and shall only observe, that nothing is of greater importance, both for the health and growth of children, than a due regulation of that essential class of the non-naturals. We agree with our author in opinion, that it would be of great service to boys, if, at a proper age, they were taught the military exercise; and we also concur with him in his remarks on the prejudicial effects resulting to the constitution from the sedentary mode of education in use among children of the other sex.

We shall lay before our readers the author's animadversions on the custom of sending children to school at a very early age.

‘ One very common error of parents, by which they hurt the constitutions of their children, is the sending them too young to school. This is often done solely to prevent trouble. When the child is at school, he needs no keeper. Thus the school-master is made the nurse; and the poor child is fixed to a seat seven or eight hours a day; which time ought to be spent in exercise and diversions. Sitting so long cannot fail to produce the worst effects upon the body; nor is the mind less injured. Early application weakens the faculties, and often fixes in the mind an aversion to books, which continues for life.

‘ But, suppose this were the way to make children scholars, it certainly ought not to be done at the expence of their constitutions. Our ancestors, who seldom went to school very young, were not less learned than we. But we imagine the boy's education will be quite marred, unless he be carried to school in his nurse's arms. No wonder if such hot-bed plants seldom become either scholars or men!

‘ Not only the confinement of children in public schools, but their number, often proves hurtful. Children are much injured by being kept in crowds within doors; their breathing not only renders the place unwholesome, but, if any one of them happens to be diseased, the rest catch the infection. A single child has been often known to communicate the bloody flux, the hooping-cough, the itch, or other diseases, to almost every individual in a numerous school.

‘ But, if fashion must prevail, and infants are to be sent to school, we would recommend it to teachers, as they value the interests of society, not to confine them too long at a time, but to allow them to run about and play at such active diversions as may promote their growth and strengthen their constitutions. Were boys, instead of being whipped for stealing an hour to run, ride, swim, or the like, encouraged to employ their time in these manly and useful exercises, it would produce many excellent effects.

The observations which this work contains on the management of children, considered either in a physical or political light, lay claim to the attention of the public. Nothing, certainly can in a greater degree contribute to the happiness of individuals, and the internal strength of a nation, than the general establishment of such a method of rearing the infant race, as may tend most to preserve their health, and improve

the vigour of their constitution. These objects constitute the noblest inheritance which men can possibly transmit to their posterity; and they deserve to be secured by all the means that are dictated by experience and reason. Dr. Buchan has here presented us with many judicious remarks, and excellent directions for that purpose, which we heartily recommend to the general notice of our readers, as a subject in which none are unconcerned who desire to promote human happiness.

As this work is of a nature extremely interesting to the public, we shall strictly examine into its merit, and continue the account of it in our next Review.

[Erratum: In some Copies, for 6s. read 7s. 6d. the Price of the Work.]

VIII. *Economy of Beauty. In a Series of Fables. Addressed to the Ladies.* 4to. 5s. 3d. sewed. Wilkie.

THE design of these Fables is to inculcate, that *personal beauty is in a high degree dependent on sentiment and manners.* Perhaps the author is somewhat of a visionary, in contending so much for this dogma; but he is excuseable, as his intentions are certainly benevolent, and we heartily wish his fair pupils may be convinced that he tells them nothing more than the strictest truth.

We cannot here help vindicating an old English Proverb, which our author subjoins as a witness on his behalf: *handsome is that handsome does*, says he, is precisely the same idea with that of Socrates, that what is good is beautiful. That what is good is morally beautiful we allow; but our ancestors, we believe, meant nothing more by their proverb than to check the pride of mere personal beauty, by ranking good actions above it, and had no suspicion that these would actually produce personal beauty, which our author teaches.

The Fables are ten in number, and are written in different kinds of verse; sometimes the verse is varied in the same fable, but this has not a happy effect.

We do not always approve our author's orthography; the reader will see that he follows Dr. Johnson in his manner of spelling *economy*, but he differs from the common mode of spelling in several other words, a practice which we cannot but condemn, as, if every author were to do the same, our language would quickly become unintelligible.

The fable of the Pelican and the Spider satyrizes the ladies who neglect to suckle their children; we subscribe to the justness of his censure, but think he weakens the argument he quotes, that it is a reproach to creatures endowed with reason to neglect a duty which nature has taught to brutes, by introducing a note to prove, that the ostrich leaves its young to perish;



perish; because, as he should have remembered, nature has also taught her to neglect them.

Our fabulist tells us, he neither deprecates nor defies the critical anathema, but makes his appeal to the ladies. We shall venture to make the same appeal, in justification of the censure we pass on the third copper-plate, in which, without the least shadow of necessity, honest Mr. Squirt, the apothecary, is represented making a very indecent injection. The ladies, we are convinced, will not recommend the insertion of any such representations in the book which is to follow. The fable, indeed, to which the abovementioned plate is prefixed, is very well told in blank verse, and concludes with the following good advice.

By reason's balance, not Sanctorius' chair  
Of ounces, grains, and scruples, weigh your life;  
Be temperate, and leave the rest to Heaven,  
To enjoy is to be grateful; what to-morrow  
May possibly produce, cease thou to ask,  
Nor be CADOGAN'D into want and woe.

There is a little blemish in the singular and plural numbers being used here indiscriminately, as—*your* life—and cease *thou*.

The fable of the Two Lamps, which is the most suitable to the author's general design, we shall lay before our readers, omitting the first hundred lines, which are merely prefatory.

'Twas at a miser's cold abode,  
Two chrystal urns survey'd the road;  
This shone, (while that was void and damp)  
Conscious of oyl and fire—a lamp.  
For shew he placed them nothing loath,  
But ah! th' expence to light them both.  
He saw by calculation clear,  
At this per day, 'twas that per year.  
'The beamless vase, when night prevail'd,  
Her unimportance thus bewail'd.  
Too partial fate, why doom to me  
This odious, dull obscurity?  
Here many a tedious night I've hung,  
Nor bless'd by old, nor prais'd by young;  
To me scarce one kind glance is given,  
While like the moon, that lamp of heaven,  
My sister, of congenial glass,  
Wins all the hearts of all that pass.  
Suppose her station they revere,  
I boast the same exalted sphere;  
Do they with awe her crown behold,  
Her dress of blue, distinct with gold;  
These gave her not superior fame,  
Her ornaments and mine the same.  
'Tis not her easy shape and air,  
Her swelling bosom heavenly-clear,  
Her smother polish, brighter hue;  
No; for in these w're hardly two.

B b

Yet

• Yet while she sits triumphant by  
 The cynosure of every eye,  
 I'm seen, if seen, with scorn alone,  
 May fall unmis'd, or stand unknown.  
 Speak, dotards speak, the difference shew,  
 Or own caprice rules all below.  
 ' Sister, forbear, the other cry'd,  
 To tell the world you're mortify'd.  
 Envy no votaries shall gain,  
 It scarce has pity for its pain.  
 'Tis not, indeed, my fairer frame,  
 No native excellence I clame,  
 'Tis not my body's happier mold,  
 More polish'd, pure, or rich with gold,  
 In these one character's our due,  
 You fair as I, I frail as you;  
 And yet while you neglected sit,  
 Or but the theme of taunting wit,  
 I fix the traveller's ardent gaze,  
 Have all his blessing, all his praise.  
 • What can this different treatment win?  
 Sure, sister, 'tis the light within.

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IX. *The Principles of Bridges, containing the Mathematical Demonstrations of the Properties of the Arches, the Thickness of the Piers, the Force of the Water against them, &c. Together with Practical Observations and Directions drawn from the Whole.* By Charles Hutton. 8vo. 2s. 6d. Wilkie.

**T**HE work here offered to the public by Mr. Charles Hutton, mathematician, contains an attempt towards perfecting the theory of bridges, wherein the properties, dimensions, proportions, and other relations of the various parts of a bridge, are, as our author assures us, strictly demonstrated, and clearly illustrated by various examples. One would naturally be led by this declaration to imagine Mr. Hutton fully convinced, that the principles upon which his calculations are founded, will stand the test of all inquiry: we, indeed, readily admit the calculations are just, but think the theory far otherwise; for it does not appear, at least to us, that he has even once taken into consideration those essential data, such as the figure, weight, dimensions, &c. of the voussloirs, so very conspicuous in the works of Varignon, Parent, Belidor, and other eminent writers upon this subject.

The late celebrated mathematician, Mr. Thomas Simpson, observed, concerning bridges, that in order to obtain a proper idea of the strength of any proposed arch, there are two things that ought principally to be attended to; the one respecting the arch itself, arising from the length and disposition



tion of the voussoirs, or archstones; and the other with regard to the thickness and strength of the piers proper for the support of such an arch. For, with respect to the former of these considerations, it is manifest, that should the voussoirs happen to be so ill adapted to the nature of the curve, and the span of the arch, as to have a tendency to open and slip out of their places with a force greater than can be balanced, or taken away by the roughness of the stone, assisted by the cement, &c. used on those occasions, which is far from being impossible, such an arch, on striking the centers, must unavoidably fall, however strong its abutments may be. On the other hand, however well an arch may be contrived and proportioned in itself, its ruin will be equally certain and inevitable, if the piers on which it is placed should not have a sufficient degree of strength to resist the lateral pressure.

As our author seems not to have paid any regard to these considerations, we cannot help thinking, but that his theory, will, upon a nice examination, prove very defective. We have not, perhaps, abilities sufficient to pursue the enquiry far enough for this purpose; yet we think it will not be difficult to point out such applications of Mr. Hutton's theorems, as may serve in some measure to confirm the opinion we entertain of this performance. It is a maxim in mechanics, that general theorems, if true, however they may in some particular cases determine nothing, yet they never exhibit conclusions contradictory to reason or common sense; if such should happen to arise from the application of Mr. Hutton's theorems, we shall think ourselves justified in exploding these principles for perfecting the theory of bridges.

Mr. Hutton's general rule for the thickness, or breadth of the piers is  $\sqrt{\frac{2AM \times AL \times A}{DQ \times EF}}$ . See pages 53, 54, and 55.

Now, if in this expression  $DG = 0$ , the arch  $AD$  degenerates into the horizontal line  $AQ$ , and the whole arch, which is now a parallelopipedon, becomes an impost to the supporting piers, and in this case there is certainly no lateral pressure whatsoever; but when  $DQ$  vanishes, the above expression becomes infinitely great, and therefore the piers must be of an infinite thickness to support the impost, which has no sort of tendency to overturn them; for farther illustration, let the arch  $AD$ , which we will here suppose elliptical, rise only three inches above the horizontal line  $AG$ , in this case the profil of  $AIKQ$  may be taken as a parallelogram, then will  $M$  be the middle of  $AQ$ , and under these circumstances, the whole arch may be considered as a parallelopipedon, to which it nearly approaches, this premised, let half the span of the

arch A Q be 45 feet, the height L A to be the springing 18 feet, then will E F be 69,  $AI = 51$ , and consequently  $2AM = 45$ ,  $AL = 18$ ,  $A = 2289$ ,  $DQ = .25$ , whence  $\sqrt{\frac{45 \times 18 \times 2289}{.25 \times 69}} = 320$  feet, or 107 yards very near, for the thickness of the piers, which we make no doubt may be sufficiently strong to support the arch, which rising only three inches above the horizontal position, can scarce have any lateral pressure, yet it seems somewhat extraordinary, that the piers in this case should require a thickness of no more than 107 yards, when in the former case, where no lateral pressure existed, that thickness was determined to be infinite.

In these investigations it is supposed that the whole of the pier is out of the water: but if any part of it O L be supposed to be immersed in water, that part, Mr. Hutton says, will lose so much of its weight as is equal to its bulk of water, and upon this account the part of the pier under water must be increased in its thickness, so that about 120 yards, we suppose, will serve for the thickness of the immersed part of the piers above mentioned. As to those whose thickness above water are infinite, we apprehend no addition can be made to the thickness of the parts immersed. We shall here take the liberty to observe to Mr. Hutton, that when it is said a body immersed in water loses so much of its weight as is equal to its bulk of water, it is to be understood of bodies suspended in that element; but surely we are not to suppose this to be the case with Mr. Hutton's piers, which we rather think are designed to rest upon the bed of the river, or, perhaps, below it. In this situation they are only surrounded by water, and consequently upon that account, there needs no alteration in the computations relative to the width of the piers.

Upon the whole, there appears something so very indirect in the theory, that we are at a loss to account for the author's design in presenting this work to the public.

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X. *The Practical Navigator and Seaman's New Daily Assistant. Being a complete System of Practical Navigation, improved and rendered easy to the meanest Capacity. The whole exemplified in a Journal kept from London to the Island of St. Maries, and back again to Falmouth: and all other Tables useful in Navigation. The Whole constructed upon a new Plan. By J. Hamilton Moore. 108 vo. 5s. Richardson and Urquhart.*

MR. J. Hamilton Moore, author of the work now before us, gives it as his opinion, confirmed (he tells us) by the "unanimous declaration of the commanders in the navy, who



who are certainly the best judges of the science of navigation, that no piece hath hitherto appeared properly calculated to lead the pupil, gradually from the rudiments to the perfection of this art." How far this assertion may be true, we shall not take upon ourselves to determine, yet certainly among the enormous quantity of books extant upon the subject of navigation, there may possibly be some which, containing the principles thereof in an elementary manner, might serve to conduct the young beginner through the various branches of this useful art: otherwise the most celebrated authors, as Atkinson, Wilson, Robertson, Patoun, &c. have spent their time to very little purpose indeed! However, be this as it may, Mr. Moore, in order to obviate all former difficulties, now presents the public with "this tract in a small compass, comprizing the essentials of every thing which has been composed on the subject, and it is hoped will elucidate every thing that in former works has been deemed obscure; and is therefore presumed, that it will be found the completest book of the kind; as it is an absolute epitome of a mariner's library, with regard to the plan. It has been examined and approved of by some of the most eminent mathematicians of the age, and distinguished commanders of the British navy, as well as masters of ships in the merchants service, whose approbation will render any apology or encomium unnecessary from the author."

Excited by this recommendatory preface, we examined the body of the work with more than ordinary attention, and have not been able to discover any thing either new or interesting, beyond what is to be met with in other modern books of navigation; there is, indeed, a very curious and useful method of correcting the dead-reckoning latitude, by means of two altitudes of the sun, together with the time elapsed between the observations; this, however, is not the invention of our author, but a late discovery, first published in 1768 by Mr. Richard Harrison of Whitehaven, and by him said to have had a thorough inspection and trial on board some of his majesty's ships of war, and has been approved of as the most exact and accurate method that ever appeared for this purpose, and by those to whom it was communicated for trial, kept as a profound secret; yet, notwithstanding this great secrecy, it has been delivered from one friend to another for farther experiment, who greatly avail themselves of this curiosity and performance; on which account, I think (says Mr. Harrison) it ought not to be retained any longer, but that the same deserves, and ought to be published for general service. I do then (continues Mr. Harrison) hereby declare, that although I have  
pub-

published this matter, yet I am not the first inventor of these tables, but have so much experience in regard to the practical part and improvements in them, that I can sufficiently testify the truth thereof in real practice.

After this, in 1771, it appeared, by the Nautical Almanac, that these tables were invented by Mr. Cornelius Douwes, mathematician, and examiner of the sea officers and pilots, by the appointment of the right honourable college of admiralty, at Amsterdam, and were by him transmitted to the lords commissioners of the English admiralty: for which Mr. Cornelius Douwes not long ago received a reward of 50l. from the commissioners of longitude. These tables having been put into the hands of captain John Campbell, have been by him enlarged to every 10 sec. of time; and this copy, having been communicated to the board of longitude by captain Campbell, were published in the Nautical Ephemeris for 1771, together with a variety of useful examples, remarks and cautions to be attended to in applying the logarithmic tables to practice.

There has lately been a republication of these tables by N. D. Flack, under the title of the Ready Observer; but neither this gentleman, our author, Mr. Harrison, or the learned editor of the Nautical Ephemeris, have annexed any theory relating to the construction of the tables, or even so much as shewing how they may be examined or farther subdivided if required. It is true, in the Ephemeris the common differences are given, which may indeed serve as a succedaneum, until in some future edition of these excellent tables, the public shall be obliged with a general method of constructing them.

Except these tables and examples of their use, we cannot (as already has been observed) trace out any thing in Mr. Moore's Navigation which has not been repeatedly treated of by other writers upon this subject, and in some few cases we think rather better; for instance, in the chronological part, Mr. Moore has this example,

The 17th of October, 1771, I demand the moon's age?

The epoch for the present year 1771 is 14

The day of the month — 16

The number of ditto — 8

—

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Answer 8 the moon's age.

But



But the moon's age on the 16th of October 1771, will be found to be 10 days; see the Nautical Ephemeris for that year; consequently here is a difference of two days in the calculation. Again: for the moon's southing the 25th of October 1771, the moon's age is 17 days according to Mr. Moore, this multiplied by 48 and then divided by 60, gives 13 hours 36 minutes, or the moon is upon the meridian at 36 minutes past one in the morning, which is indeed near the true time; but the moon's age on the 25th of October 1771, answers to 19 days, which our author makes only 17. The next example is to find the time of high-water at London Bridge on the 18th of October 1769.

	Hours	Min.
The moon's southing is	2	24
To it add Lond. S. W. and N. E.	3	0
Sum is the time of high water	5	24 min. in the morning.

The real time of high water at London Bridge on the 18th of October, was 24 minutes past 4 in the morning. We rather think that if two hours were constantly added to the true time of the moon's coming upon the meridian, the sum would always give the time (very near) of high water at London Bridge.

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XI. *An Historical Description of the Cathedral and Metropolitital Church of Christ, Canterbury: containing an Account of its Antiquities, and of its Accidents and Improvements, since the first Establishment.* 8vo, 2s. Law.

**T**HIS publication is chiefly designed for strangers, who are prompted by curiosity to view the cathedral church of Canterbury. The compiler has given a short history of the origin, the various demolitions, alterations, and improvements of this venerable structure, a view of the monuments, with their inscriptions, in the cathedral, cloisters, &c. and a catalogue of all the archbishops, deans, and archdeacons, from their original institution to the present year.

An Appendix is subjoined, containing a particular account of the burning and rebuilding of the church of Canterbury, in the year 1174, translated from the Latin of Gervase, one of the monks, an eye-witness.

The following is the author's preliminary account of the cathedral.

In the year 1011 the Danes having landed at Sandwich, besieged this city, and on the 20th day of the siege set it on fire. The cathedral was at the same time consumed, and of all the monks and inhabitants nine parts in ten were put to

the sword. Alphege, the archbishop, was carried away prisoner, and after seven months confinement, was stoned to death at Greenwich. From 1020 to 1038 the repairs of the church were carried on by archbishop Egelnodus, assisted by king Canute's munificence, who presented to it his crown of gold, and restored to it the port of Sandwich and its liberties, which Ethelred had given before. In 1067 the church was again consumed by fire; and in 1073 Lanfranc, being called by the Conqueror from Normandy to preside over this see, set about rebuilding it, and in seven years finished the work, erecting it on the same ground, but on a different model, viz. on arches of stone, after the Norman manner.

In 1092, the choir so lately built, was taken down by Lanfranc's immediate successor archbishop Anselm. Egnolphus, then prior of the convent, reared it again with more splendor and magnificence, and after his death it was finished by his successor prior Conrad, and was thence called, "The glorious choir of Conrad. Of Lanfranc's choir, no description remains. In 1114 this new choir was dedicated; and in 1130, having been again damaged by fire, it was again dedicated, with such solemnities, that the like was never heard of since the dedication of Solomon's Temple, the king (Henry I.) the queen, David king of Scotland, and the nobility of both kingdoms being present. In 1170 (Dec. 29.) archbishop Becket was barbarously murdered at the foot of the altar of St. Benedict, ever since called, "The Martyrdom." But notwithstanding what some Romanists may believe, so far are these stones from being stained with his blood, that the stones themselves were removed to Peterborough by prior Benedict, in the year 1177. The stones indeed which surround his shrine and which still remain, are visibly worn, and probably by the knees of his votaries, *Gutta cavat lapidem, &c.*

In 1174, three small houses in the city, near the monastery gate, taking fire (Sept. 5.) a strong south wind carried the flames towards the church, and at length burnt down the whole choir a third time, together with the prior's lodgings, &c.

In 1180 (April 19.) the archbishop, prior, and monks, entered the new choir, singing *Te Deum* for their happy return to it, it being then near finished; and by the end of 1184, the whole building was completed, being larger in height and length, and more beautiful, in every respect, than that of Conrad. Thus this choir was finished at the sole expence of the convent in ten years, and in the present year (1772) is 592 years old, being above 200 years older than the nave, or body.



\* On July 7, 1220, the reputed saint, Thomas Becket, was translated from his tomb in the Undercroft to his shrine, with the greatest solemnities and rejoicings, the king (Henry III.) being present, and Pandulph, the pope's legate, with the archbishops of Canterbury and Rheims, and many bishops and abbots, carrying the coffin on their shoulders. The description which Brasimus gives of the shrine, is as follows: "A coffin of wood, which covered a coffin of gold, was drawn up by ropes and pulleys, and then an invaluable treasure was discovered; all shone and glittered with the rarest and most precious jewels of an extraordinary bigness; some were larger than a goose's egg. When this sight was shown, the prior with a white wand touched every jewel one by one, telling the name, the value, and the donor of it." It was built, says Stowe, about a man's height, all of stone, and then upward of timber plain, &c."

\* In 1379, the north and south wings having been rebuilt, archbishop Sudbury took down all the old nave of the church which Lanfranc had built, with a design to raise it again at his own expence, to a state and beauty proportionable to the choir: but in the next year, before he had laid one stone for the foundation, he fell into the hands of a rebellious rabble (Wat Tyler, &c.) who cut off his head on Tower-hill. This obliged the convent to undertake it at their own charge, in which they were assisted by the two succeeding archbishops, Courtney and Arundel. This building was finished in the year 1410, being about thirty years in hand, and is now 362 years old.

\* What seems peculiarly beautiful in this church, is a double flight of steps, which leads from the body to the choir, and to which it will be difficult perhaps to find a resemblance, except in the church of St. Amand, in French Flanders. The length of the body is 225 feet, the breadth 75 feet, its height 80 feet, the length of the choir 180 feet, the breadth 35 feet, and the whole length from the west door to the east window 525 feet.

\* The height of the middle tower is 235 feet, that of the north steeple 100, and of the south 130. These two are at the west end. In the latter is a ring of eight musical bells, besides one on which the clock strikes, new cast in the year 1762, which weighs 7500 weight.

\* In the east part of the church are two sumptuous monuments of Edward the Black Prince, and of Henry IV. with Joan his second queen. The Black Prince died June 8, 1396, Stowe says at the archbishop's palace in Canterbury; but other historians say, at the king's palace in Westminster. He was interred in this church on the feast of Saint Michael following,

the parliament attending. It is a large and noble monument; the inscription in French verse, is by letters inlaid with brass. The corpse of king Henry IV. was brought by water to Feversham, and thence by land to Canterbury, where his funeral was performed with great solemnity, his son, King Henry V. and the nobility being present. In his will, made about three years before his death, are these words: "And what tym hit liketh God of his mercy for to take me to hym, the body for to be buried in the church of Canterbury. Also y devyse and ordeyn, that there be a chauntre perpetual of twey priestis for to sing and pray for my soul in the aforeseyd church of Canterbury, in soch place and after soch ordinance as hit semeth best to my cousin of Canterbury."

\* Of the archbishops, who from Augustine to Pole, are seventy in number, forty-eight were buried in this church, and twenty-one in other places, besides Cranmer, whose body was consumed in the flames. Cardinal Pole was the last that was buried here, it being remarkable, that no archbishop has been interred in this cathedral since the Reformation, which has given the Papists occasion to say, that St. Thomas Becket will not suffer it. Under the choir is a spacious church, granted in the time of queen Elizabeth to eighteen families of French refugees, and used by their descendants ever since.

\* The priory of Christ Church being dissolved by a commission, dated March 20, 31 Henry VIII; two years after, the king created by letters patent a new society, consisting of a dean, an archdeacon, and twelve prebendaries, three of whom are in the archbishop's nomination, and the rest in the king's. The present dean is Dr. John Moore; the archdeacon, Dr. William Backhouse; the prebendaries are, doctors Tanner, Tatton, Curteis, Sutton, Caryl, Dering, Durell, Benson, Berkeley, Storer, Palmer, and Barford.

\* There are, besides, six preachers (appointed by the archbishop) and six minor canons. King Henry VIII. founded also a grammar school, consisting of two masters, and fifty scholars, who receive a stipend of 1l. 8s. 4d. per annum. The present masters are, the reverend Mr. Beauvoir, and the reverend Mr. Tucker.

This compilation seems to be the work of a faithful and accurate antiquarian.



## FOREIGN ARTICLES.

XII. *Histoire de l'Ordre du S. Esprit. par M. de Saint Foix. Paris, 2 Vols.*  
 12mo. [Continued.]

IT is one of the noblest prerogatives of merit and of virtue, to need no commentary nor panegyric; to disdain alike the recommendations of rhetoric and sophistry; not to beg, but to command the respect of intelligent beings; to stand fixed in the constitution of things, beyond the reach of doubts and opinions, factions and change; not to steal, but to seize an approbation rapid as thought, resistless as truth, spontaneous as sentiment, and co-eternal with the Deity.

A character impressed by a few, plain, sudden, decisive words: "Add, that I have saved your life, when you relate that you have wounded and perhaps killed me,"—I would prefer to all the results of the campaigns of a Charles XII. of the politics of a Philip II. and of a Voltaire's works in prose and rhyme.—But the estimate of all its value, we will reserve for the sentiments of the wisest and noblest among our readers.

To these we need not, to others we will not, apologize for warmth of approbation, nor for our care in recording all the examples of interesting merit we can any where meet with. They are every where one of the greatest necessities of humane and moral life, and so scarce!—They

"*Quos ardens evexit ad æthera virtus,*" —

"*Apparent rari nantes in gurgite vasto!*"

\* Jacques Goyon, lord of Matignon, &c. Without entering into a detail of the sieges, battles, and various engagements, in which he merited the command of armies, and the dignity of a marshal of France, we may, even from the testimony of his enemies, safely conclude, that he must have been a man of uncommon merit: "Wit, capacity, prudence, courage, say they, were not naturally in him, but the result of a compact with the devil."—That devil must then have been a very good-natured creature; since Mr. de Matignon proved on all occasions a character full of sweetness and humanity.

\* Having taken some towns in Normandy by storm, he, in spite of the sanguinary orders he had received from Catherine of Medicis, preserved the inhabitants from the fury and rapacity of his soldiers.

\* The Leaguers were very numerous at Bourdeaux, and were about to seize on that city; when Matignon, upon being apprized that they already began to barricade themselves in the streets, instantly sallied from his palace in his waistcoat, and at the head of his guards attacked those rebels, sword in hand, with such spirit as to disperse them, and by that action secured the city for the king. The only victim that fell upon this occasion, was a Capuchin, whom he caused to be hanged, for preaching sedition.

\* Some peasants in Guienne, who, as they said, were overburthened with the weight of taxes, &c. made an insurrection, and in less than a month, their number increased so fast that near forty thousand of them were already assembled, when Matignon marched against them. After some trifling engagements, in which his experience secured him always the advantage of the ground; he induced their chiefs to agree to a conference, in which he addressed them with such firmness and humanity, that in less than three weeks he quelled that sedition, which might have become very

very dangerous. After they had dispersed themselves, he was so far from using rigour, or making an example of them, that he became their intercessor, and obtained the remission of all the taxes then due.

‘ While the other provinces were a prey to all the horrors of a civil war, he maintained tranquillity in Guienne, constantly rejected the tempting offers of the League, and continued to the last faithful to his sovereigns, Henry III. and IV.

‘ *François de la Baume*, Count of Suse, &c. The Baron des Adretz, so famous for his cruelties, sent him a challenge, to fight him, three against three. De Suse answered him: ‘ That he would never expose any man’s life but for the king’s service; but if he would come alone to the place appointed in his challenge, he would find him there, alone. They fought: and after Suse had laid his antagonist by two wounds at his feet, he asked him: ‘ What would you do with me, were I reduced to your present situation?’ ‘ I would dispatch thee,’ replied des Adretz. ‘ That I am sure of,’ returned de Suse; ‘ but be assured, that I never have killed nor ever shall kill an enemy at my feet.’ After which he caused him to be carried to the next house, and did not leave him, till his wounds, which proved not dangerous, were dressed.

‘ *Charles de Balsac*, lord of Clermont d’Entragues, &c. was killed in the battle of Ivry, at Henry IV’s side. This prince frequently said, that he never could think of that battle, without recollecting the tender and affectionate look turned on him by d’Entragues, when he fell and closed his eyes for ever.

That eloquent tenderness of a last glance, so quickly discerned, and so strongly felt by a king, in the midst of personal danger, and a decisive battle, and many other instances, prove that Henry IV. had, what he deserved, friends, ready to die for him. The problem, whether a king can possibly have friends, is a scandalous insult on humanity.

‘ *Tanneguy le Veneur*, lord of Carrouges, &c. On receiving Charles IX’s orders, to cause the Hugonots at Rouen to be killed, as they had been at Paris, on St. Bartholomew’s day and night, he said: ‘ I thought that, as often as they took up arms, I had fought them with such honour and reputation, as might have spared me the disgrace of being now chosen for their assassin.’

‘ Sully, Thuanus, and d’Aubigné say, that all his endeavours to prevent that massacre, proved ineffectual, and only served to save a very small number.

‘ The next morning, before all these bodies of slaughtered men, women, and children, with which the streets were crowded, were thrown into the Seine, the catholics bethought themselves of a charitable invention, which was, to strip them naked, in order to distribute their bloody cloaths to the poor.

‘ What must we think of man, if he could fancy, that his God commanded him to assassinate his fellow citizens? or, if he did not believe so; if religion was only a pretence for plundering, ravishing, and satiating personal furious jealousies, hatred, and vengeance: we are forced into the horrid thought, that man is restrained only by the fear of human laws, and that, could it be done with impunity, half of the inhabitants of a town would soon be murdered by the other half.

‘ *François de Mandelot*, lord of Passy, &c. Pierre d’Espinac, archbishop of Lyons, a most vicious character and a furious Leaguer, endeavoured to draw Mandelot over on the League’s side. Mandelot heard



heard his proposals, thoroughly sifted his intrigues, measures, &c. and then advised Henry III. to seize and publish his papers, and thereby expose the criminal and ambitious designs of the Leaguers. By taking his advice, that king would have averted the misfortunes which afterwards befel both himself and the kingdom.

The last moments of that wretched man were not very edifying. On a Capuchin's approaching his bed, and addressing him with, "Peter d'Espinac, think of death!" the archbishop raised his head, opened his eyes, darted a glance of contemptuous disdain on the poor Capuchin, by whom he had been so familiarly addressed, turned himself on the other side, and expired.

As for Mandelot, he died greatly regretted in his government, and with the reputation of having always been more solicitous to serve the state than to please the court. Father Edmond Auger, observed, in his funeral oration, that he had never signed the League, but died firm in his religion, and true to his king. It is somewhat remarkable, that at a time, when the League was so powerful, a Jesuit publicly disapproved it, as contrary to the king's service, before the duke of Mayenne, who was then at Lyons, and assisted at the ceremony.

*François de Valette*, &c. wrote to his uncle, Jean de Valette, grandmaster of Malta, who, in 1565, so nobly defended that place against the whole naval power of the Turkish empire, "You appear to be satisfied with me: I should be proud of your approbation, if I could answer to myself, that my conduct in the two last occasions in which I commanded, had not been exaggerated to you—Your triumphs are not embittered by a secret grief: you enjoy them unallayed; but we, in this unfortunate kingdom, whom are we fighting against? Our relations, fellow citizens, Frenchmen?"

*Louis d'Angennes*, baron de Messe, &c. after the assassination of Henry III. warmly insisted in the council, that the bloody corpse of that unfortunate prince, should be exposed on the bridge of St. Cloud, that the whole army should march by it, and instantly attack the gate of St. Honore; and that Paris should be abandoned to all the fury and revenge, with which the soldiers would be inspired. The atrociousness of such a proposal can be only equalled by its folly. To expiate the crime of a few guilty individuals, by the blood or ruin of innumerable innocents!—Besides, the army was too weak; the Parisians were indeed less numerous than now, but less effeminate too, enured to dangers and wars, fired with fanaticism, and probably far more numerous than the army: the very small difference in point of discipline between them and the troops would, on the army's dispersion through that vast city, by their excesses, and by the despair of thousands of men fighting for their fortunes, families, and lives, been more than compensated; the execution of this brutal scheme would have proved the destruction of the army, no less than that of the capital; it would have covered its contriver with everlasting infamy; and embittered the life of Henry IV.

Fortunately that excellent king had too clear a head, and too good a heart to listen to such an excess of frenzy: and since d'Angennes was so happy as not to succeed in his wishes, his proposal might charitably have been consigned to oblivion, as being by no means an example honourable to the nation, or worthy of so illustrious an order as that of the Holy Ghost.

'On the evening after the reduction of Paris, d'Angennes came to the Louvre, and on seeing Henry IV. playing at cards with the duchess of Montpensier, was seized with so great and so visible emotions, as made the king ask him the cause. 'Me thought, replied d'Angennes, I saw the bloody shade of Henry III. looking on you.'—Henry IV. cast down his eyes; and so confounded was the duchess, that the cards dropped from her hands. It was well known that she had been the contriver of Henry III's death.'

'Gilles de Souvré, marquis of Courtanvaux, &c. was possessed of integrity, candour, disinterestedness, love for his country, of every moral virtue, and a general esteem—Henry III. said: 'Were he not a king, he would wish to be Souvré.'

'In 1589, the League made him the most advantageous offers: and the duke of Mayenne, says Thuanus, added, that instantly on his signing the treaty, one hundred thousand gold crowns should be paid to him.—'You would then very dearly buy a traitor,' was Souvré's reply.

'Grillon one day reproached him, that, after having always spoken with great liberty to Henry III. he now, for some time, seemed to court him, and to be complaisant to him in all things. 'Alas, answered he, it is because for some time he has been very unfortunate, and deserted by every body.'

'In 1591, a lady whom he loved, and a friend he confided in, told him, that Henry IV. suspected him of an intention to engage in an opposition; that he intended to take his government of Touraine from him; and that a sight of the proofs of these intentions had been offered to them. 'It would be useless to shew them to me; he replied: I serve him because he is my king; and as, notwithstanding such an injustice, he would still be my king, I would not declare myself against him, even after having suffered that usage with which you think me threatened.'

'Henry IV. thought, he could not give a more favourable idea of the dauphin's education, than by appointing Souvré for his governor, who was made marshal of France in 1613, and died in 1620, at the age of 84 years.

[To be concluded in our next.]

XIII. *La Religion vengée de l'Incredulité par l'Incredulité elle même. Par M. l'Evêque du Puy. Paris. 12mo.*

THOUGH the various tribes of infidels are always at variance with each other, and often inconsistent with themselves, the final results of their jarring arguments coincide at least in some remarkable respects: in evincing beyond contradiction the weakness of human understanding, by their own example; and in usurping the rank of esprits forts, in spite of common sense.

An attentive view of their sophistry, cannot indeed but raise the smile of contempt; but a serious reflection on their auxiliaries in the human breast, on vices and folly, on fashions, and the pangs of a despairing conscience, must soon blend our pity for their mental disorder with indignation at their horrid attempts to spread it among the young and the thoughtless, the innocent, the weak, and the powerful.

To this fatal and infectious disease of the mind, a great variety of remedies has been applied by benevolent men in every age and country, in which it has appeared: and among these, the bishop of Puy has not a little signalized his charity.



In this latest attempt of his, he begins his curative method by classing the common enemies of religion under their different banners, Theists, Deists, Atheists, and Sceptics.

Theists he calls those, who believe not only in the existence of God, but also the duty of worshipping him; the law of nature, of which he is the source; man's free-will, and consequently the morality of human actions; the immortality of the soul, and a future state of retribution: but who deny revelation.

Deists are these human creatures, who admit the existence of God, without any kind of worship.

As for Atheists and Sceptics, they need not be defined.

These formidable bands being thus drawn up in battle array, the first engagement is between the Theists and Deists on one side, and the Sceptics on the other.

The second battle is fought by the madness of Atheism, against the combined absurdities of Deism and Theism.

But the most disgraceful conflict of all, is that between Sceptics and Atheists.

After three such desperate engagements, the most severe and impartial reason may, in compassion to their mutual wounds and exhausted strength, dismiss them as invalids.

Such are the contents of the three parts of this book; which is concluded with an excellent recapitulation of the three divisions, fraught with sensible and spirited remonstrances against impious publications.

To every thinking mind it is a self-evident truth, that in the conflict between religion and atheism, and scepticism; not only the present and future happiness or misery of individuals, but also the safety and the very existence of civil and human society, are at stake.

But as there are periods, in which the attention of multitudes is wasted on trifles, it cannot be amiss sometimes to remind the inconsiderate,

‘ To be, or not to be, that is the question !’

and to repeat even to the respectable governors of mankind, ‘ Vi-  
deant Consules, ne quid detrimenti resp. capiat.’

#### FOREIGN LITERARY INTELLIGENCE.

14. *L'Elève de la Raison et de la Foi. Par M. l'Abbé de Berniere, Au Mans. 2 Vols. 12mo.*

A STOUT champion this, who has successively engaged not only infidels, but also heretics of all denominations.

15. *Encyclopédie Littéraire, ou Nouveau Dictionnaire raisonné et universel d'Eloquence et de Poésie, dans lequel on traite de tous les genres de Littérature, et de toutes les Regles qui leur sont propres, des Figures de Grammaire, de Logique, et de Rhétorique, avec des Exemples sur chaque Objet.*

Ouvrage utile aux gens de Lettres, aux Orateurs, aux Avocats, aux Instituteurs, et généralement à toutes les Personnes qui veulent cultiver leur esprit et acquérir des connoissances dans toutes les parties de la Littérature, et des principes généraux de goût relativement à plusieurs Arts, tels que la Peinture, la Musique, la Danse, la Déclamation oratoire et théâtrale, et à toutes les Parties qui y ont du rapport, comme le Geste, la Pantomime, l'Action, l'Accent, la Prononciation, &c. &c. On y a joint l'Etymologie et les Définitions de tous les mots, soit simples, soit Figurés, ainsi que la Traduction Française des Exemples tirés des Auteurs Grecs et Latins, Italiens et Espagnols, anciens et modernes. Enfin, on n'a rien

oublié, pour simplifier tous les Principes qui sont renfermés dans cet Ouvrage, et pour mettre les Lecteurs de tout Age et de tout Sexe à portée d'avoir des Notions exactes et précises de toutes les Branches de Littérature. Par M. C. de l'Académie Royale des Sciences, Inscriptions et Belles Lettres, de Châlons-sur-Marne. Paris, 3 Vols. 8vo. A—F.

But for the instruction conveyed by this concise and modest title, we might unluckily have mistaken the work itself, from its contents, for an useless compilation from books known even to foreigners, interspersed with original crudities and blunders, and printed for the use of pastry-cooks and trunk-makers.

16. *Voyage en Californie, pour l'Observation du Passage de Venus sur le Disque du Soleil, le 3 Juin 1769: contenant les Observations de ce Phénomène, et la Description historique de la Route de l'Auteur à travers le Mexique.* Par feu M. Chappe d'Auteroche, de l'Académie Royale des Sciences. Ouvrage rédigé et publié par M. de Cassini fils, de la même Académie. 4to. Paris.

The history itself of the late Mr. Chappe's voyage, is very short—but three fourths of this small volume, consist in curious physical experiments, and interesting astronomical observations.

17. *Histoire de l'Avénement de la Maison de Bourbon au Trône d'Espagne, dédiée au Roi.* Par M. Targe. 6 Vols. 12mo. Paris.

The military details in this elegant work are very numerous, circumstantial, and interesting for officers: politicians may be entertained by the intrigues and negociations, especially during the last years of Charles II. and philosophers may here and there pick out some curious character and anecdote.

18. *Histoire des Révolutions de Corse depuis ses premiers habitants jusqu'à nos Jours.* Par M. l'Abbé de Germanes, Vicaire general de Rennes. 2 Vols. 12mo. Paris.

The contents of this book are affecting, and its diction agreeable and elegant. The first volume comprises the ancient history, and the revolutions of Corsica to the end of the last century; with a topographical and physical description of the island: the second ends with its evacuation by the French, and the government of general Paoli, and concludes with an historical account of the legislation of Corsica, anterior to its acquisition by the French monarch; and a picture of the genius, character, manners, customs, &c. of its inhabitants. But the most interesting part, containing the total subjugation of the island by France, drawn from the relations of ocular witnesses and parties, such as French generals, intendants of the army, &c. will make a third volume, and possibly furnish another article for the Critical Review.

19. *L'Honneur François, ou Histoire des Vertus et des Exploits de notre Nation; depuis l'établissement de la Monarchie jusqu'à nos jours.* Par M. de Sacy.

*L'Honneur parle; il suffit: c'est là nos Oracles.* Racine. 6 Vols. 12mo. to the end of the Reign of Lewis XIII. Paris.

And yet, previously to such an implicit obedience to the oracles of honour, it might not have been amiss, accurately to investigate the just and precise idea of honour in general, of national honour in particular; and of the compatibility of its oracles with the demands of justice, the dictates of truth, and the pretensions to happiness.

We have in this compilation met with many actions and events, which we should never have expected there.



20. *Le Fablier François, ou Elite des Meilleures Fables depuis la Fontaine.* 12mo. Paris.

So great a variety of authors, and of attempts selected from La Motte, J. B. Rousseau, Mess. Aubert, Montcrif, Greccourt, des Mahis, Rivery, Pesselier, Favart, Watelet, Fuselier, Barbe, Richer, Le Monnier, Fontenelle, and Voltaire, is very entertaining: but a very evident proof too, that la Fontaine is still inimitable.

21. *Miscellaneous Essays on Philosophical and Political Subjects.* By Mr. Wolleb. 2d. Edition. Basil. 8vo.

Consisting of a set of masterly pictures, of a governor, a judge, and a freeman, under the title of the Republican; Exhortations concerning the Education of Daughters; on the narrow Limits of human Knowledge; Letters on Laws and Legislation; and some Essays on Free-Thinkers: equally creditable to the judgment and the heart of their author.

22. *Joseph; en IX. Chants, par M. Bitaubé, de l'Académie Royale des Sciences et des Belles-Lettres de Prusse.* Berlin. 8vo. (with 10 elegant Plates.)

A subject so highly instructive and pathetic as the History of Joseph, has, by Mr. Betaubé, been happily chosen and treated, in Gesner's manner, in a very poetical and harmonious prose, full of tenderness and virtuous sensibility.

23. *Réflexions sur le triste Sort des Personnes qui sous une Apparence de Mort ont été enterrées vivantes, et sur les Moyens qu'on doit mettre en Usage pour Prévenir une telle Meprise; ou Précis d'un Mémoire sur les Causes de la Mort subite et violente, dans lequel on prouve que ceux qui en sont les Victimes, peuvent être rappelés à la Vie.* Par M. Janin, Maître en Chirurgie, &c. 8vo. Paris.

By the frequent instances of sudden deaths, from a variety both of maladies and of accidents, and by the successful assistance often given to drowned persons, Mr. Janin has been induced to extend the endeavours and successes of ingenuity and humanity still farther, and to attempt the rescue of a number of persons from the horrid fate of being buried alive. His very plausible theory is strengthened by two successful experiments of his own: the one, on a child smothered by its nurse; the other on a person that had hanged herself; both recalled to life, and saved by the same process. This small treatise has been presented by its author to the king of France; and he proposes to publish a more elaborate work on a subject so interesting to humanity.

24. *Description du nouveau Pont de Pierre, construit sur la Rivière d'Allier à Moulins, avec l'exposé des Motifs qui ont déterminé son Emplacement et les Dessins et Détails relatifs à sa Construction, par M. de Regemortes, premier Ingénieur de Turcies & Levées.* Folio. (with 16 Plates.) Paris.

Three bridges had been ruined by the rapid impetuosity of the Allier at Moulins; within less than forty years; a wooden one in 1676; another, in 1689; a third, built of stone, under the direction of the famous architect Mansard, with unexampled precautions, just after it had been completed in 1710.

After these repeated frustrations of great labour and expence both administration and architects hesitated for forty years, what plan to adopt in order to provide for a safe and convenient passage over that dangerous river at Moulins: a passage necessary for the

communication with the southern provinces; till M. de Regemortes was at length by the council commissioned to plan and direct the construction of another stone bridge.

The present interesting performance, illustrated with necessary and elegant plates, gives a full, plain, and satisfactory account of his measures, motives, precautions, incidental difficulties, expedients, and success, in acquitting himself of that honourable, tedious, and hazardous task.

25. *Introduction à l'Etude des Corps Naturels tirés du Regne Minéral, par M. Bucquet, Docteur Regent de la Faculté de Médecine de Paris. 2 Vols. 12mo. Paris.*

Dr. Bucquet proposes to combine and to facilitate the studies of natural history and of chemistry, by a methodical and perspicuous introduction common to both.

His new and excellent method renders these elements complete and concise; useful to beginners, and even to proficients.

26. *Essai d'un Catalogue de l'Oeuvre d'Etienne de la Belle, Peintre et Graveur Florentin, disposé par Ordre Historique, suivant l'Année où chaque Piece a été gravée: avec la Vie de cet Artiste traduite de l'Italien et enrichie de Notes. Par Charles Antoine Jombert. Paris. 8vo.*

This celebrated artist united talents, industry, and success. His life, prefixed to this chronological account of his works, is well written; and not uninteresting. In Mr. Cochin's judgment, all his various works, consisting of battles, hunting and sea-pieces, landscapes, ruins, animals, cartoons, &c. 1270 in number, are excellent. In our opinion, this performance may serve to animate the endeavours of artists, and prove both useful and agreeable to connoisseurs.

27. *Del modo di migliorare l'Arta di Mantova, Dissertazione di A. M. Lorgna, Tenente Colonello d'Ingegneri, e Professore di Matematiche nel Collegio Militare di Verona. La quale ha riportato doppio Premio della Reale Accademia di Scienze e Belle Lettere di Mantova l'Anno 1770.—In Verona. 4to.*

Amidst the confusions in Italy during the 12th century, the inhabitants of Mantua thought proper to strengthen their city by increasing the inundations of the river Menzio.

A succession of ages has at length taught their descendents, that this momentary and precarious security in times of war, was rather too dearly bought, by the loss of the more important and perpetual advantages of an healthy air and situation.

Hence the judicious problem of the Mantuan academy; and its present useful and satisfactory solution.

## MONTHLY CATALOGUE.

### D I V I N I T Y.

28. *Friendship with God. An Essay on its Nature, Excellence, Importance, and Improvement. By Richard Jones. 12mo. 3s. Dilly.*

THIS writer considers Friendship with God under many different views. He observes, that this friendship was the original state of man; that the restoration of it is the grand design



design of the gospel; and that it is restored wherever Christianity is cordially embraced; that God is the friend of man in the highest degree; that a knowledge and a choice of him, a delight in him, a devotional intercourse, cheerful service, and unchangeable constancy, entitle us to this exalted privilege. He points out the characteristical virtues of Abraham, who is expressly styled by St. James, "the friend of God," viz. his faith, resignation, and zeal. He reviews some of the most excellent perfections of the Supreme Being, which render friendship with him infinitely desirable, such as his power, omnipresence, faithfulness, and eternity. He remarks, that this representation exhibits religion in an amiable form, reflects a pleasing light upon Providence, prepares a good man for afflictions, and makes the prospect of death familiar and agreeable; that by these means, we see where to place the real dignity of human nature; and perceive, that this life is consistent with the noblest pursuits. As motives to this friendship he observes, that the ambition of it is natural, and commendable, attended with the highest honour, and the sublimest pleasure; that it is due to God in point of gratitude, and absolutely necessary to our present and future happiness.

'In order to maintain this friendship, we must, he says, be humble, pay a constant regard to the mediation of Christ, maintain high and honourable thoughts of Divine Providence, make a religious use of God's bounties, be frequent in acts of repentance, and, in a word, aspire after greater degrees and habits of purity.'

This treatise, of which these are the outlines, is drawn up in a plain and practical form; and may be read with edification and comfort by the serious and pious Christian.

29. *Sermons by the late rev. Mr. John Whitty, Minister of the Gospel at Lyme Regis, Dorset. 2 Vols. 8vo. 10s. Buckland.*

The first volume contains discourses on the following subjects, namely, the several Petitions of the Lord's Prayer, the Nature and Excellence of Christian Love, the Love of God, the Love of our Enemies, the Nature of true Self-love, the Law established by Faith, the Imperfections of Mankind in this Life, and Perfection in Heaven.

In the second volume the author treats of the Lord's Supper, the Duty of Watchfulness and Circumspection, the Penitential Review of Sin, the Sufferings of Christ, Christ's peculiar Love a most desirable Blessing, Gospel grace a strange Thing, the Church of Christ a Family in Heaven and on Earth, Serious Reflection a seasonable Duty, and God's gracious Presence in his Churches.

These discourses are written upon the Calvinistic scheme; yet the serious reader will find in them a vein of good sense and piety, flowing in an easy, but not, in the least degree, low or contemptible language.

30. Τὰ Χίλια ἔτη. *A Dissertation on the Millennium*, 8vo. v. Horsfield.

The doctrine of the Millenium has employed the pens of many learned, many speculative, and many visionary writers. Justin Martyr seems to be fully persuaded, that they who believe in Christ shall dwell a thousand years in Jerusalem. Irenæus, Tertullian, Lactantius, and others, were of the same opinion. In the third century, it had such a general effect, that many are said to have courted martyrdom, in hopes of a share in the first resurrection. Dr. Whitby, in an excellent treatise on this subject, makes it appear, that the doctrine of the Millennium was never generally received in the church of Christ; that there is no just ground to think it was derived from the apostles, but rather from a mistake of the words of the author of the Apocalypse; or from the notions of the Jews, and of the Sibylline author; and that the new patrons of the Millennium differ in many things of moment from the ancient assertors of it, and have, indeed, scarce any suffrage of antiquity for that Millenium, which they so positively maintain.

The author of this Dissertation contends, that the First Resurrection, Rev. xx. 6. is not to be understood literally; and that nothing more is meant by St. John, than that the enemies of Christ being destroyed, and the power of Satan restrained, the church shall enjoy, for a determined time, an uninterrupted peace.

This pamphlet is written with modesty and candour, and the author appears to be a man of learning; but it is too short to give an inquisitive reader satisfaction, on a subject which requires a full and extensive disquisition.

31. *Daily Devotions for the Closet. To which are added Prayers on particular Occasions. By the late rev. Samuel Merivale.* 12mo. 1s. 6d. Buckland.

The late worthy author of these prayers had prepared them for the press just before his death; and it was his desire that they should be published. Two of them were drawn up by another hand. Some expressions in them are borrowed from Dr. Doddridge, Dr. Watts, and others. They are in general written in a very proper style, and animated with a laudable spirit of devotion.



32. *An Enquiry into the Principles of Toleration, the Degree in which they are admitted by our Laws, and the Reasonableness of the late Application made by the Dissenters to Parliament for an enlargement of their Religious Liberties.* 8vo. 2s. Buckland.

The result of this Enquiry is, that liberty in matters of religion is the right of all; that a right to protection from the magistrate is the just consequence of their claim to this liberty; and that no difference of opinion, respecting modes of worship, or, in a word, any thing which does not interfere with the rights of others, can justify his laying any restraints upon it.

The author, having given us a view of some of the penal laws relating to Dissenters, and traced them up to their first principles, observes, that they evidently stand in the fullest opposition to all claims of religious liberty.

The principles of Toleration, he says, affirm, that, for the use of this merely religious liberty, no man ought to be hurt with respect to his peace, freedom, or estate. These laws imply, that for this cause alone, he may be punished with respect to all these interests: that is, in other words, that he may be persecuted for conscience sake; for these are the very principles upon which persecution relies for its defence: they are pregnant with all the evils of which that dreadful iniquity is productive; and, wherever they are admitted, vindicated, and the effects of them justified, the principles of Toleration are so far excluded. To be consistent advocates for the continuance of penalties founded on such a basis, and friends to the rights of conscience in their due extent, is impossible. So long as these laws remained in their full force and extent, so long as they were the rule of judgment upon all those who thought themselves bound to dissent from the ecclesiastical establishment, all supposition of a right to be tolerated in departing from points determined by that, was in effect disavowed. For the same principles, by which conformity to these doctrines, and modes of worship was required, might, with equal justice, have been applied to any others enjoined in like manner; the same arguments which were urged for inflicting punishments on those who refused submission in cases already settled, would have been judged equally clear and cogent for the use of them in all others of a similar nature; and no pleas of conscience, how sincere soever, would have been allowed as a sufficient reason for exemption from them.

The author of this Enquiry has treated his subject with a degree of calm and sober reasoning, which is not often to be found in controversial writings.

33. *Free Thoughts on the late Application of some Dissenting Ministers to Parliament; in a Letter to the rev. \*\*\*\*\**. By Edward Hitchin, B. D. 8vo. 1s. A. Bell.

This writer professes himself to be one of the Protestant Dissenters styled Independents. His religious notions seem to be Calvinistical. With respect to subscription, he declares, that he thinks it an honour to subscribe with his hand what he believes with his heart; that, at years of maturity, he finds not the least occasion to renounce the principles which he imbibed in his youth; and that he cannot agree to trouble the legislature with an application for relief, which he does not want; especially as there appears to be no disposition in government to distress his conscience on account of religion. He tells us, that he is convinced, from facts, that the late application to parliament would never have been proposed, if the gentlemen concerned in the proposal had not disliked the Articles, which the Act of Toleration requires them to subscribe; that he will not interrupt any of his fellow dissenting subjects in making a *proper* and *decent* petition for relief, whenever relief becomes needful; but that, notwithstanding he is a friend to religious liberty, 'he had rather continue under censure, than join in a prayer to the legislature for toleration in preaching, praying, and printing against the doctrine of the Holy Trinity, or the atonement of our Saviour; or in a prayer to encourage such tenets as Dr. Priestley has published in his penny and twopenny pamphlets.'—In short, he disapproves, he says, of the whole affair, for various reasons, as the suddenness of the proposal, the rapidity with which it was carried on, the narrowness of spirit discovered in the management of it, the nature of the petition substituting one human test in the room of another, its being equally severe against those who cannot subscribe it in its precise form, as the old test, inasmuch as the penal laws are not repealed, its not being sufficiently catholic, as it only begs for the grant of a test which many cannot or will not take, the unsuitableness of the time of application, &c.

This Letter contains some remarks on the late publications of Mr. Mauduit, Dr. Kippis, and Dr. Stennett, which seem to be founded on principles of equity and moderation.

34. *A Letter to Sir William Meredith, upon the Subject of Subscription to the Liturgy and Thirty-Nine Articles of the Church of England*. 4to. 1s. Swan.

The writer of this letter is one of the petitioning clergy.—In reference to the church of England, he allows this position of Dr. Tucker, that some bond, or centre of union, is necessary



fary to the existence and continuance of such a society. But he differs very widely from that learned writer, with respect to the nature of this bond. The following conclusions flow from his reflections in the former part of this Letter.

‘ First. The advancement of those doctrines, which are contained in articles and confessions framed by man’s device, cannot with decency be supposed to be the avowed design of any religious Protestant society, farther than such articles agree with the written word of God. And therefore the promoting the knowledge and practice of that word, independent of its harmony with any system of opinions whatsoever, is, or ought to be, the great, and indeed the only, aim of the established clergy of this kingdom.

‘ Secondly. No articles or confession of faith whatever, whether conceived in human or even scriptural terms, can be the bond or center of union to a society of Christian ministers. Their only bond must be, an obligation, faithfully, resolutely, and zealously to promote the knowledge of God’s law to the best of their understanding and ability—to exert each faculty in the investigation of his will, and every power of persuasion in recommending the practice of it to their hearers.

‘ And thirdly. Although it is allowed, that in every society, whether supported by private contributions or parliamentary patronage, there is vested somewhere a right of defining the conditions, upon the performance of which, its acting members shall become intitled to those emoluments, which are allowed as stipendary considerations for its services; yet, it must be both absurd and iniquitous in this society, to prescribe such measures of conduct, as tend to defeat the very end of its institution; and if its avowed purpose be to promote Christian knowledge and Christian practice, that is to say, to promote the progress of a religion confessedly divine, nothing surely can be more impious, and more immediately subversive of its design, than to require from each candidate for admission an *ex animo* assent to a set of articles, expressive of the sense of one particular sect or age: as such measure must unavoidably perpetuate those traditional errors, which the society was instituted to remove; and instead of diffusing gospel light, may spread one uniform gloom of intellectual and moral darkness over every succeeding generation.’

The latter part of this Letter contains some cursory observations on the Dissenters cause, and academical subscriptions.

The author discusses the points in question with great accuracy and precision.

35. *A Free Inquiry into the Origin, Progress, and Present State of Pluralities.* By W. Pennington. 8vo. 4s. White.

The intention of the author in this work is to shew, that the permission of non-residence, and a plurality of benefices, with cure of souls, has been the occasion of many scandalous abuses. For this purpose he commences his enquiry at the first establishment of Christianity, and brings it down to the present age. In the course of his remarks he endeavours to refute the arguments advanced by Wharton in his *Defence of Pluralities*, Warner in his *Ecclesiastical History*, and others. He has displayed acuteness and learning, but, in our opinion, too much acrimony in this performance.

### P O E T R Y.

36. *Youth. A Poem.* By Hall Hartson, Esq. 4to. 2s. Griffin.

The natural progress and pursuits of youth through the stages of childhood and puberty are agreeably painted in this poem, where the author's genius appears to be as much animated with the fervour of his subject, as his mind is enlightened by reflexion. The descriptions and sentiments are equally beautiful; and the gradations of life are characterised by such circumstances as are not only peculiar to the distinct periods, but also the best fitted for receiving the embellishments of poetry. We shall lay before our readers the following passage as a specimen.

Still as the eye wide wanders o'er the green,  
New aims, new objects, crowd the changeful scene.  
Here rise the mimic works of war like hands,  
There in mock fight engage the marshaled bands;  
Here too the painted galley meets the view,  
Along the shores exult the admiring crew,  
While o'er the lake it spreads its silken sails,  
And all its streamers feel the rising gales.  
Nor frown ye wise, if wisdom deign to hear,  
Because such artless trifles meet the ear;  
The rose so loved must bud before it bloom,  
And yonder oak, that spreads so wide a gloom,  
Beneath whose arms the flocks and herds repose,  
His full-grown honours to an acorn owes.  
In this fair field are sown the seeds of fame,  
In each young bosom lives its native flame,  
Which through these trifles breaks with early ray,  
These but the dawns of their brighter day.  
In peaceful councils this shall gain renown,  
For that Bellona wreaths the war like crown;  
He too, who gave his galley to the breeze,  
One day may hold the empire of the seas;  
And now, even now elate with fancied power,  
Enjoys the glories of the future hour.



37. *The Kenrickad : a Poem.* 4to. 1s. Griffin.

This allegorical poem is intended to satyrise the author of "Love in the Suds," for his injurious treatment of Mr. G. in that performance. But as, by an advertisement in the public papers, Dr. Kenrick has totally disclaimed the insinuations supposed to be contained in the abovementioned fugitive production, and engaged to suppress it, we shall consign the *Kenrickad* to the same oblivion with the other poetical effusion.

### DRAMATICAL.

38. *The Irish Widow.* In two Acts. As it is performed at the Theatre Royal in Drury Lane. 8vo. 1s. Becket.

In point of merit, this production may be ranked in the same class with *An Hour before Marriage*, to which it has a great similarity in the fable. The situation of Whittle is almost entirely the same with that of Stanley. By this remark, however, we mean not to detract from the author's invention, who we think deserves indulgence for endeavouring to improve upon a piece that had met with a bad reception last season. The characters of Whittle and Kecksy are drawn in very lively colours, and afford agreeable entertainment; but it may be objected against those of the Hibernians, that the risibility they excite proceeds chiefly from the peculiar species of colloquial blunder denominated the *bull*; and that the description of Widow Brady is sometimes overcharged with indelicacy.

### NOVELS.

39. *Memoirs of an American.* 2 Vols. 6s. Noble.

These volumes, translated from the French, are of so mixed a texture, that you cannot, while you are reading them, well know where to have the author.—You are at a loss to know when he writes in the character of the *Novellist*, and when he assumes the dignity of the *Historian*; when he is a fabricator of fables, or when he is a narrator of true occurrences. The volumes, however, are not unentertaining upon the whole. The American's private story, with all its accompaniments, is related in such a manner as to interest the reader in his domestic affairs; and there are throughout this part of his little work, many strokes of the natural and the pathetic.

40. *The Explanation : or the Agreeable Surprise.* 2 Vols. 12mo. 6s. Noble.

Though there is nothing very interesting in these volumes, though the characters are not very strongly marked, nor the little business in them very artfully conducted; the perusal may afford amusement to those who deal in this sort of manufactured literature.

41. *The Way to Lose Him; or the History of Miss Wyndham.*  
2 Vols. 6s. Noble.

This novel, whatever faults the critical reader may find in its composition seems calculated to be of service to the unmarried fair ones of the age, who, when they are happily addressed by men every way worthy of their attention, are so little acquainted with their true interest as to occasion the desertion of them from the capriciousness and indiscretion of their behaviour.

42. *The Way to Please Him: or the History of Lady Sedley.*  
2 Vols. 6s. Noble.

The subject of the foregoing article is particularly addressed to *unmarried* ladies; that before us, seems to be as well executed for the instruction of *married* ones. Those, especially who have husbands of a roving turn, and strongly disposed to neglect their wives, in search of temporary intimacies with other women, will be interested in the perusal of these volumes. The hero of the piece behaves in a manner sufficient to provoke the heroine's resentment; while she, by her uncommon discretion and address, appears in a most amiable light. To speak in less elevated terms, lady Sedley, is, indeed, an exemplary wife, and may serve as a pattern to married ladies in similar circumstances. Those circumstances are far from being extraordinary; and if married women would take the pains to please the men with whom they are united for life, there would be fewer matrimonial complaints, few separations, fewer divorces.

#### M E D I C A L.

43. *Directions and Observations relative to Food, Exercise, and Sleep.*  
8vo. 6d. Bladon.

This pamphlet is drawn up in a careless manner, and several of the directions and observations are frivolous. It contains, however, many useful dietetical precepts respecting the three non-naturals of which it treats.

#### P O L I T I C A L.

44. *Letters on certain Proceedings in Parliament, during the Sessions of the Years 1769 and 1770. Written by John Hope, Esq. late Representative for the County of Linlithgow.* 8vo. 1s. 6d. Almon.

These Letters are eighteen in number, addressed partly to the earl of Hopetoun, and partly to lord Hope, his son. They evince the author to be a gentleman of sense and independent spirit, and seem to contain a faithful account of the transactions in the house of commons during the period specified in the title-page.



## MISCELLANEOUS.

45. *An Argument in the Case of James Somersett, a Negro, lately determined in the Court of King's Bench: Wherein it is attempted to demonstrate the present Unlawfulness of domestic Slavery in England. To which is prefixed a State of the Case. By Mr. Hargrave, one of the Counsel for the Negro.* 8vo. 2s. Otridge.

This speech is highly judicious and elaborate, and discovers the author to be possessed of distinguished abilities for the bar. The important question relative to domestic slavery is here investigated with great accuracy and precision. After stating the particular case of Somersett, and making some general observations, the learned counsel endeavours to prove by several arguments, that since the extinction of ancient villenage, the law of England will not admit a new slavery. He next examines how far the introduction of domestic slavery from our American colonies, or any foreign country, is affected by the cases and judicial decisions since, or just before the expiration of villenage. Having adduced many learned observations on this subject, Mr. Hargrave then considers the force of the objections which may, probably, be made both to the inferences he has drawn from the determined cases, and the general doctrine he maintains. This part of the subject is discussed with extensive knowledge and candour; and upon the whole, the learned counsel seems to have clearly evinced the present unlawfulness of domestic slavery in England, by arguments drawn from history, law, and natural justice.

46. *A Treatise on English Shooting.* By George Edie, Gent. 8vo. 1s. Cooke.

Since we first entered on the province of reviewing, we have seen the precepts for almost every sort of exercise reduced to a didactic art. Even within the last twelvemonth, our memory has been refreshed with treatises on skating, fencing, angling, and riding. The gentleman who now favours us with observations on shooting, seems to be a competent master of the subject, and the directions he delivers are certainly such as may conduce to the improvement of the young sportsman.

47. *The Description of an entertaining and useful Instrument, called Gunter's Quadrant.* By William Leybourn. 8vo. 1s. Gilbert.

This little tract, which contains a complete description of Gunter's quadrant, so called from the name of its inventor Edmund Gunter, was originally written by William Leybourn, and since his time much improved by several successive editors ;

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In this edition, which is the fourth, the reader will find the usual lines upon the quadrant, such as the horizon, ecliptic, azimuth, &c. clearly explained, and the use of the quadrant, and nocturnal, commonly placed upon the back of the quadrant, well described; to which are added some examples illustrating the use of the ring-dial, whereby the latitude first, and then the hour of the day, may be found in any place throughout the habitable world. We therefore take the liberty to recommend this description of the abovementioned quadrant as a work of considerable utility to the purchasers of that useful instrument.

48. *A Practical Introduction to English Grammar and Rhetoric.* By Abraham Crocker, Schoolmaster, at Ilminster. 8vo. 1s. Robinson.

Dr. Lowth's Introduction to Grammar is an excellent performance: the critical notes are valuable; and the rules and observations as easy and familiar, as grammatical rules and observations can be made. A second perusal would enable any young person of tolerable capacity to understand the whole. But if any other Introduction should be thought necessary, Mr. Crocker's may answer the purpose, better perhaps than any publication of this kind, which has lately appeared.

In an Appendix the author has given some directions for reading with propriety, and a short system of rhetoric.

49. *Six Letters to Philip Le Hardy, Parish Priest, in the Island of Jersey.* 8vo. 6d. Hooper.

As personal disputes are not properly subjects of criticism, we shall only observe, that these Letters, appear to be dictated by indignation rather than malevolence, and contain some spirited expostulations. They are founded upon papers printed some time since in the Public Ledger, attempting to traduce the author of the Authentic Narrative of the Oppressions of the Islanders of Jersey, and said to have written by Mr. Philip Le Hardy.

50. *Letters from an English Gentleman, on his Travels through Denmark, to his Friend in London, concerning the late Transactions in Copenhagen.* 8vo. 1s. Wheble.

The design of this pamphlet is to justify the late violent measures of the popular party at the court of Copenhagen. The author discovers such a zealous attachment to the side of the queen dowager, that we are strongly induced to question the authenticity of his representations; and there is likewise reason to suspect, that this travelling gentleman has performed his tour in the closet.